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Thursday's News, see Coloured Supplement.

Summary.

A CURIOUS and amusing belladonna-plaster case is reported on p. 155.

"A VICTORIAN JUBILEE" tells of Mr. Edward Towl's pharmaceutical career in Victoria (p. 201).

THE DETAILS of a mortar grip, with drawings, are communicated by Mr. W. Lister in a note on p. 180.

MR. DANIEL DAVISON describes a dozen more old metal mortars, and Dr. L. Dobbin a large one dated 1664 (p. 197).

TERRITORIAL representation has been well discussed by North Staffs chemist, and Mr. Tocher's scheme approved (p. 152).

THE PAPAW-TREE is interesting West Indian agriculturists. We give some facts about it, and tell how papain is made (p. 185).

THE PHARMACIST may with advantage be a food-specialist, according to Mr. J. P. Gilmour, who gives hints as to practice (p. 150).

MR. JOHN TAYLOR, of Bolton, a member of the Pharmaceutical Council, died last week. We give some notes of his career on p. 210.

THE ENTebbe HOSPITAL DISPENSARY, in British East Africa, is the subject of an illustrated article by Mr. A. E. Bertie-Smith on p. 192.

MR. JOSEPH INCE contributes some old memories of British pharmacy, especially connected with his old *confrères* in Bloomsbury (p. 194).

ECZEMA is described in an interesting and practical fashion by a medical contributor, who also tells the best methods of treatment (p. 175).

IN DRUG-TRADE TOKENS we illustrate a number of copper coins issued by persons connected with the drug-trade in the eighteenth century (p. 204).

LEAD exists in commercial ammonium carbonate, but to a very small extent—viz., 1 in 20,000. Mr. C. T. Bennett describes how he found it (p. 203).

MESSRS. SOUTHALL BROTHERS & BARCLAY's extended premises are described, with illustrations and a portrait of Mr. Thomas Barclay, on p. 190.

THE jubilee of the Pharmacie Centrale de France has been celebrated this week, and in connection with it we relate the history of the concern (p. 208).

THE question as to what is a stearin-free oil at a specified temperature has been discussed before a City of London judge, and is reported on p. 155.

SANDALWOOD OIL FACTORS are the subject of a paper by Messrs. Parry and Bennett. They show that the refractive index should never fall below 1.5030 (p. 202).

EIGHT MEMBERS OF PARLIAMENT attended the first dinner of the London Chemists' Association on Tuesday evening, and most of them spoke about the Pharmacy Bill (p. 212).

THE SALT given in the Corner for Students last month was a mixture of microcosmic salt and calcium and magnesium sulphates. Messrs. F. J. Watt and S. L. Roberts get the prizes (p. 142).

THE NORMAL SALINE SOLUTIONS which correspondents have been writing about are called "isotonic solutions." Mr. W. A. Knight explains and illustrates the principle upon which they are compounded (p. 200).

A SOUTH AFRICAN medical congress has been held at Cape Town, when an alarming increase in consumption amongst the natives was reported. A pharmaceutical exhibition was held in connection with the congress (p. 206).

AN EIGHTEENTH CENTURY LABORATORY is figured and described in an article which begins on p. 182. There also are figured and described some old pieces of chemical and pharmaceutical apparatus which look very modern.

A DEPARTMENTAL BILL to amend the Medicine-stamp Acts will, it is stated, be introduced into Parliament shortly. We warn registered chemists that legislation on this subject may be detrimental to their interests (p. 169).

THE TINCTURES OF THE BRITISH PHARMACOPEIA are reported upon by Mr. T. F. Harvey, who gives sp. gr., total solids, and alcohol by volume of each tincture, and describes his method for determining the amount of alcohol in tinctures (p. 178).

IN *Now and Then*, this week, our contributor further demonstrates the care with which the framers of the Medicine-stamp Acts conserved the rights of chemists, as qualified persons, to vend medicines without stamp duty. At the present juncture this thesis should be carefully studied (p. 163).

Corner for Students.

CONDUCTED BY LEONARD DOBBIN, PH.D.

REPORTS.

THE powder distributed to students on January 2 contained 8 parts of sodium ammonium hydrogen phosphate (microcosmic salt), 1 part of hydrous calcium sulphate, and 1 part of magnesium sulphate.

The calculated composition of such a mixture is—

Ca	...	...	...	...	2.3
Mg	...	...	...	...	1.0
Na	...	...	...	...	8.8
NH ₄	...	...	...	...	6.9
H	...	...	...	...	0.4
SO ₄	...	...	...	...	9.5
PO ₄	...	...	...	...	36.3
H ₂ O	...	...	...	...	34.8
					100

A trace of chloride was the only noteworthy impurity present.

Samples of the powder were distributed to forty-two students, and twenty-seven reports were sent in for examination.

Our correspondents all detected the presence of sodium. The failures in the detection of the other constituents of the powder were: (a) Metallic radicals—Calcium, 12; magnesium, 9; ammonium, 1. (b) Acid radicals—Sulphuric, 1; phosphoric, 1. Four students failed to note the evolution of water when the powder was heated in a dry test-tube.

The exercise submitted this month was a simple example of a mixture requiring special analytical treatment as a phosphate, and, in reporting upon it, we propose to resume consideration of the treatment necessitated in such cases, in continuation of our general remarks of three months ago on the subject of phosphates (*vide C. & D.*, October 31, 1903, page 716). We strongly recommend every student to read these remarks again in connection with what follows here.

The appropriate treatment with hydrogen sulphide of the hydrochloric-acid solution of the original powder proved the absence of substances precipitated by this reagent. After expelling the hydrogen sulphide by boiling and then adding ammonia in excess, a precipitate consisting of calcium and magnesium phosphates was obtained. The filtrate from this precipitate did not give any precipitate when treated with ammonium hydrosulphide; while, on the addition of magnesium sulphate to a portion of it, a precipitate of ammonium magnesium phosphate was formed, and hence it only required examination for alkali metals, since, in presence of excess of ammonia, barium-group metals and magnesium could not remain in solution in it along with the phosphoric radical. (It is worth noting that not one of our correspondents seems to have thought of applying the second of the above tests.)

The precipitated phosphates were best dealt with by employing the "acetate method" for removing the phosphoric radical. A common way of applying this method consists in dissolving the precipitate in dilute hydrochloric acid and converting the iron into the ferric condition; then diluting the solution largely with water, and by the cautious addition of sodium or ammonium hydroxide neutralising the greater part of the excess of free acid, after which a considerable quantity of sodium or ammonium acetate is added and the mixture is gently warmed for a few minutes. If iron or aluminium is present, a precipitate of ferric or aluminium phosphate (or of both) now separates. It may be represented that the effect of the sodium or ammonium acetate is to replace the free hydrochloric acid of the solution, in which these phosphates are soluble, by acetic

acid, in which they are insoluble. (As iron and aluminium were absent in the present instance, no precipitate was obtained at this stage.) To the filtrate from any precipitate which may have formed, or simply to the solution if no precipitate has formed, solution of ferric chloride is next added, drop by drop, with continuous shaking, as long as a precipitate is produced, and until the solution just begins to assume a red colour. The precipitate consists of ferric phosphate (which, as stated above, is insoluble in acetic acid), and is produced as long as there is any phosphoric radical in the solution. The red coloration, which is due to the formation of ferric acetate in solution, only makes its appearance when the phosphoric radical has been entirely precipitated as ferric phosphate, and so serves as an indicator to show when enough ferric chloride has been added. Care must be taken not to add more than a very small quantity of ferric chloride in excess of that actually required, since ferric phosphate is distinctly soluble in solution of ferric acetate. The red solution, with the precipitate of ferric phosphate mixed with it, is now gently boiled for a minute or two, whereby the ferric acetate in solution is converted into an insoluble basic ferric acetate. The hot mixture is filtered immediately, and the filtrate obtained is then free both from the phosphoric radical and from iron, and can be examined at once for barium-group metals and magnesium.

The value of this separation is often impaired by inattention to details which must be observed if its complete success is to be secured. Some of the more frequent causes of failure may be referred to here.

The solution which is being operated upon must be very dilute, otherwise the ferric acetate is not completely converted into the insoluble basic ferric acetate, and part of the iron passes into the filtrate. The formation of the basic acetate is the result of hydrolysis, and the conditions which favour hydrolysis must therefore be observed. For this reason the boiling must not be too prolonged, since the concentration of the acetic-acid solution will thereby become materially increased (owing to the loss of water-vapour), and the basic acetate will begin to dissolve again. For the same reason the filtration must be carried out while the mixture is still hot, since the hydrolytic effect is much diminished at low temperatures, and the basic acetate begins to redissolve in the free acetic acid on cooling.

Besides adding sodium acetate, a number of students mistakenly add sodium phosphate in all cases to the solution which is to be treated, subsequently, with ferric chloride. The object of this addition is apparently to ensure the precipitation, as phosphate (at the stage where the sodium acetate has been added and the mixture heated), of the whole of any iron or aluminium which may have been present in the original phosphate precipitate. When applied with discrimination, the method can occasionally be of service, but when employed as a routine process it must often involve unnecessary expenditure of time and labour, and it may also involve analytical error. It is obviously uncalled for in all those cases (such as that under notice this month) in which (1) the filtrate from the original phosphate precipitate contains the phosphoric radical, and the precipitate therefore contains all of that radical which is necessary for the metals present in it; and (2) when the original phosphate-precipitate does not contain iron or aluminium. It may lead to error in the following way: When ferric phosphate is precipitated from acetic-acid solutions containing barium-group metals or magnesium, it tends to carry down with it as phosphates small quantities of these metals, although the same phosphates would not be precipitated at all from such solutions in the absence of iron. When the

quantity of phosphoric radical which has to be separated as ferric phosphate is greatly increased (by the unnecessary addition of sodium phosphate), it may occasionally happen that the whole, or practically the whole, of any barium-group metals or magnesium present will be carried down in this way, as phosphate, along the bulky precipitate of ferric phosphate; and as the latter precipitate is not usually tested for these metals, their presence may be overlooked entirely.

Remarks on some other points concerning the "acetate method" may be deferred until a future occasion.

PRIZES.

The First Prize for the best analysis has been awarded to
FRED. J. WATT, Hingham, Norfolk.

The Second Prize has been awarded to
S. LOVELL ROBERTS, Medical Hall, Yeovil.

First Prize.—Any scientific book that is published at a price not greatly exceeding half-a-guinea may be taken as a first prize.

Second Prize.—Any scientific book which is sold for about five shillings may be taken as a second prize.

The students to whom prizes are awarded are requested to write at once to the Publisher naming the book or books they select.

MARKS AWARDED FOR ANALYSES.

1. Correspondents who are unqualified:

F. J. Watt (first prize) ...	98	Morphia ...	...	83
S. L. Roberts (second prize) ...	97	Beta-Naphthol ...	...	82
Alchemist ...	96	W. P. P. ...	...	82
Poly ...	96	Iralas ...	...	78
Radix ...	96	J. R. H. ...	...	78
Alchemy ...	95	Durus ...	...	77
J. S. W. ...	85	Venus ...	...	77
Acetum ...	84	Xenon ...	...	67
Nondum ...	84	J. E. S. Hackforth ...	...	52
S. T. Bennett ...	83	Na ₃ PO ₄ ...	...	46
G. K. F. ...	83			

2. Correspondents who are qualified, or who have not indicated that they are unqualified:

Cryptopine ...	93	Hebron ...	...	84
Danwer ...	78	J. H. P. ...	...	70
F. H. W. ...	80	M. H. W. ...	...	82

TO CORRESPONDENTS.

F. J. WATT.—The information afforded by your analysis was not sufficient to enable you to draw accurate conclusions as to the original salt employed in making the mixture. If you have not read the book already, you will obtain novel and suggestive ideas, not only with respect to such matters, but also regarding many other analytical problems, by making a careful study of Ostwald's "Scientific Foundations of Analytical Chemistry" (Macmillan).

POLY.—You will observe from the quantitative composition of the powder that the sodium present amounted to much more than a mere trace as impurity.

ALCHEMY.—It is not quite clear from your report what the solution was to which you added ammonia with a view to testing for magnesium, and we do not consider that you established beyond doubt the presence of this metal.

J. S. W.—The fact that ammonium molybdate yielded a bright yellow precipitate with a nitric acid solution of the powder on warming, but before the mixture boiled, cannot be regarded as proving the absence of an arsenate. The precipitate which you mistook for aluminium hydroxide may probably have consisted of normal ammonium phosphate, which is nearly insoluble in concentrated solution of ammonia.

G. K. F.—Ammonium carbonate is not a delicate reagent to use as a test for calcium in presence of considerable quantities of other ammonium salts. Ammonium oxalate should always be added and the solution boiled before it is concluded that traces of calcium are not present.

MORPHIA.—We are not familiar with the test which you employed with a view to detecting the presence of magnesium, and your failure to find the magnesium which was present, does not inspire us with much confidence as to its value.

BETA-NAPHTHOL.—The best mode of dealing with any particular phosphate-mixture depends a good deal upon the constituents present, as to which a few dry-way tests may afford valuable guidance. The acetate method is the most generally useful, and was certainly the best in the present instance. Read our general remarks this month and those of October last.

W. P. P.—We recommend you to apply the alcohol and sulphuric acid test for acetate to a number of mixtures, some of which do, while some do not, contain an acetate, so as to familiarise yourself with the differences in their behaviour. See also reply to "G. K. F."

IRALAS.—Nine and a half per cent. of sulphuric radical is something more than a trace. Distilled water is an indispensable requisite for accurate analytical work. If it is not otherwise obtainable, why not distil some for yourself?

VENUS.—The precipitate you obtained on adding ammonia and sodium phosphate to a filtrate which could not contain magnesium (and supposed to be ammonium magnesium phosphate) probably consisted of normal ammonium phosphate, due to your having employed concentrated instead of dilute solution of ammonia.

XENON.—Your report reveals some serious misconceptions. After having proved aluminium absent in a place where it might be present, you obtain a reaction which leads you to regard it as present in a place where your own work proves it could not be. Then you conclude that chromium is absent because a filtrate which could not contain a chromate, although it might contain a chromic salt, is not coloured yellow.

F. H. W.—It seems strange that you did not treat the powder as a phosphate-mixture, although you recognised the presence of the phosphoric radical. Your omission to do so is responsible for your failure to find calcium.

J. H. P.—You describe the separation of a "white precipitate of phosphates," which appears from your analysis to have consisted of nothing at all! Your analysis further leaves quite unexplained the insolubility of a part of the powder in water.

M. H. W.—In reply to your query, sodium hydroxide would be a better reagent than ammonium sulphide in the case mentioned, but yellow potassium sulphide would be better than either.

English News.

Local newspapers containing marked items of news interesting to the trade are always welcomed by the Editor.

Brevities.

An ironmonger's assistant at Callington splashed a quantity of spirit of salt into his eyes last week. He was removed to the Eye Infirmary, Plymouth, where hopes of saving his sight are entertained.

The well-known firm of Messrs. Mumby & Co. (Limited), mineral-water manufacturers to H.M. the King, of Portsmouth and Gosport, have decided on rebuilding a portion of their factory at Gosport.

Of the seventy-four samples of Foods and Drugs examined by M. Arthur E. Ekins, analyst to the Hertfordshire County Council, during the past quarter, two were camphorated oil, and both were genuine.

The President of the Board of Trade has appointed a Committee, with Lord Rayleigh as chairman, to inquire as to the methods now adopted for testing the gas supplied by the metropolitan gas companies.

At Manchester County Police Court on January 25, Andrew Davidson, shopkeeper, of Heaton Norris, was fined 20s. and costs for selling strawberry-jam containing 3½ gr. of salicylic acid per lb. Notice of appeal was given.

The off wine-licence attached to the chemist and druggist business carried on at Bishop's Waltham by Mr. Geo. Goodlife has been transferred by the Droxford Bench to Mr. Ernest John Caffyn, chemist and druggist.

In connection with the county court action against Messrs. Stone & Co., of Cardiff, reported in last week's issue (page 108), Messrs. W. Pickard & Co. (Limited), manufacturing chemists, Sheffield, inform us that they have had a judgment for debt and costs, 13l. 3s. 11d., against defendants for some time, and the Cardiff Judge made an order against defendants to pay 2l. per month.

The legacy of 10,000*l.* left to the deserving poor of Castle Donington by the late Mr. James Farmer, chemist and druggist, has been invested, and a residue of 230*l.* from the annual income will be distributed amongst 142 persons.

Mr. J. Burton, of the Old Curiosity Shop, Falmouth, says he has since 1863 made a practice of gathering annually wild palms (a species of *Salix caprea*) at Pendennis Castle Drive, Falmouth, on January 18, which is at least six weeks in advance of any other part of England.

On Tuesday, at the weekly meeting of the London County Council, it was reported by the Improvements Committee that the leasehold and trade claim of Messrs. Morson & Son, of 29, 31, and 33 Southampton Row, had been settled for 7500*l.* The amount claimed was 9,945*l.*

At Hull on January 21, an inquest was held on the body of a man named Wilks, who died as the result of being crushed by machinery at the cod-liver-oil and chemical-manure works of his employers, Messrs. Spencer & Sons, Maxwell Street, Stoneferry. After hearing evidence, the jury returned a verdict of accidental death.

A man named Frederick Williams, alias Dangerfield, was committed for trial by the Swindon Magistrates on January 25 on charges of fraud. It was stated that he called upon shopkeepers and induced them to take up agencies for the sale of a fluid which he described as magnesium carbide, a composition he had patented for strengthening incandescent mantles and improving the light. It was proved that the fluid is merely a mixture of whiting and water and of no value.

Bradford Drugs.

Mr. F. W. Richardson, the Bradford city analyst, in his report for 1903 states that of 484 samples submitted to him during the year, thirty-five, or 7½ per cent., were found to be adulterated, and sixteen, or 33 per cent., of doubtful quality. In the course of his remarks he says a so-called baking-powder proved to be a mixture of alum and a little starch. A sample of lime-water contained only two-thirds the proper amount of lime. Two samples of compound liquorice-powder contained over double the proper amount of sulphur, with a corresponding deficiency of the more expensive constituents. A citrate of magnesia gave 1 gr. of lead per lb. A vinegar sample showed 1 part of sulphuric acid in 700, whereas no free mineral acid should be present. A cream of tartar yielded ½ gr. of copper per lb.

Drawback on Sugar.

The Board of Customs have issued a General Order (No. 2 of 1904) directing that drawback is in future to be allowed on duty-paid foreign sugar which has undergone a process of crushing and colouring in the United Kingdom. The conditions to be observed for obtaining this drawback are similar to those applicable in the case of caster and icing sugar.

Dangerous Substances on Ferry-boats.

On Tuesday, January 6, the Bridges Committee of the London County Council reported having considered the question of amending by-laws relating to Woolwich Ferry. The adoption of the following new by-law was recommended:

The Council hereby declares that in its opinion the following goods—namely, naphtha, or other mineral spirit, bisulphide of carbon, sulphuric, nitric, muriatic, or other corrosive acid, turpentine, methylated spirit, lucifer matches, picric acid, and other substances, whether similar to those above-mentioned or not, specially liable to cause injury or sudden fire or explosion, are injurious, and may prejudicially affect the use of the ferry-boats and the traffic to be carried therein within the meaning of Section 23 of the Metropolitan Board of Works (Various Powers) Act, 1835, and hereby prohibits the embarkation of the same unless marked or unless notice be given as hereinafter mentioned; and any person who embarks on the ferry boats, or sends or conveys by the ferry, any such goods without distinctly marking their nature on the outside of the package containing the same, or otherwise giving notice in writing to the superintendent, or other servant of the Council on duty at the ferry, at the time of sending, is hereby declared to be guilty of an offence against these by-laws.

Fire.

An extensive fire broke out shortly after six o'clock on the night of January 24 at Messrs. H. F. and Lee Smith's Oil-mills, Wincolmlee, Hull. The mills were stored with

cotton-seed, linseed cotton oil, and linseed oil, and before the police fire-brigade had arrived on the scene the fire had established a good hold. It was not got under until damage estimated at 40,000*l.* to 50,000*l.* was done. The mill is a very large one, and as this is the height of the seed-crushing season, a large number of men will be thrown out of employment.

The Funeral Stopped.

A painful event has followed the death of Mr. John W. Cowap, chemist, of Winsford, whose death we announced last week. Dr. Woodyatt attributed death to heart-failure and granted a certificate, but on January 21, just before the funeral, a telegram was received from the Coroner which led to the burial having to be postponed. Some mistake seems to have occurred. The affair caused a painful sensation, as all the arrangements for the funeral had been completed, and the hearse and mourning coaches were in attendance.

Sheffield Notes.

In Mr. Turner's B.P. paper the suggested change in lin. ammoniac should be "add ½ fl. oz. of ammonia solution"—not water.

At Sheffield, on January 25, George B. Owen, chemist and druggist, 51 Crescent Road, was fined 1*l.* and costs for cruelty to a pony by beating it. The defendant denied cruelty, saying the punishment inflicted was necessary to cure the horse of jibbing.

Some interesting facts were elicited at the arbitration proceedings last week between the Corporation and Mr. W. H. Woodson, the present proprietor of "Wilkinson's Medical Hall" in Fitzalan Square, which, together with adjoining property, is required for widening purposes. No. 4 Baker's Hill (the address of the hall) was said to be occupied by the son of the proprietor, and described to be "not a qualified practitioner; but he carried on a business similar to that of a doctor in these premises, and it was that business that the claimant carried on very successfully until he retired and transferred the business to his son." The claimant's valuation was about 12,650*l.*, and that of the Corporation only 8,000*l.* The arbitrator reserved his decision.

Trade is very bad here, relief-works, distress-funds, &c., are in full blast, and pharmacists are having their share in the general depression. Consequently they have been somewhat cheered by receiving, in common with most householders throughout the city, the sale-catalogue issued by one of the leading drapery, &c. establishments. A special feature of this catalogue is the coloured slip enclosed of the "substantial genuine reductions" in the department for "drugs, patent medicines, perfumery, toilet, sick room and invalids' requisites, and photographic goods," wherein the pharmacist has the pleasure of learning that he and the public generally may purchase Clarke's blood-mixture (2*s.* 9*d.* size), for which he has to pay 2*s.* 0¼*d.* net cash, for the sum of 1*s.* 10½*d.* Beecham's pills (1*s.* 1½*d.* size), which are quoted in Messrs. Evans' list at 9*s.* 10*d.* in dozen lots, are being offered at 9½*d.*, and Eno's fruit-salt (2*s.* 9*d.* size), listed at 21*s.* 10*d.* in six-dozen lots, are to be sold at 1*s.* 9*d.* Among other interesting items are 1-lb. bottles of pure glycerin at 10½*d.* per bottle; Parrish's chemical food at 7½*d.* per 1-lb. bottle; Dr. Hale's meat, malt and tonic wines (3*s.* 6*d.* size) for 1*s.* 8*d.*, and 2*s.* 6*d.* size for 1*s.* 1*d.* 5,000 gals. (!) of eau de Cologne, imported direct, are offered "below cost-price," and 3,000 loofahs, "very large size," are reduced from 6*d.* to 2½*d.*

One of our leading pharmacists took the trouble to get a friend to write an order for 1 doz. of Eno's fruit-salt and 1 doz. of Clarke's blood-mixture, this order being sent in immediately the sale opened. A reply was received expressing

regret that owing to the overcrowding of our shop, it being the first day of our sale, we have not been able to give your requirements the necessary attention, but will do so first thing Monday morning. Trusting the slight delay will not inconvenience you and assuring best attention.

This was followed by a further letter stating that

with further reference to your kind order we regret being sold out of goods required, and beg further to say that we shall not be repeating these goods during our sale at sale prices.

Note that the order was received immediately after the sale opened.

Tragic Death of a Bristol Chemist.

Mr. George Daubeney, a Bristol chemist and druggist, has died under tragic circumstances. Mr. Daubeney was fifty years of age, and had been in business in Bristol for a lengthy period, his shop being in St. Mark's Road, Easton; there he lived alone. He had not been seen for four days, his shop remained closed from Tuesday until Saturday, and neighbours became concerned about him. On Saturday evening the police broke into the house and found Mr. Daubeney in a back room sitting in a chair in an unconscious condition. They summoned medical aid, and Dr. Flood was promptly in attendance, and he advised the immediate removal of the sufferer to the Royal Infirmary. Mr. Daubeney was conveyed thither, but his condition was hopeless, and he died an hour after reaching the institution. An inquest was held before the Deputy City Coroner (Mr. E. A. Barker) on Tuesday, when Dr. J. A. Nixon, house-physician at the infirmary, said that a *post mortem* examination showed that he had apparently had no solid food recently, but he had not the appearance of a man who had been starving for two or three days. Witness thought the most probable conclusion was that the deceased had died from blood-poisoning, due to a small abscess in the leg. There were no obvious signs of his having taken poison. The jury returned a verdict in accordance with the medical testimony.

Secret Remedies.

Mr. Troutbeck held an inquest at Westminster on January 25 on the body of Emma Gilby (59), who sent to a chemist for a penny "headache-powder," and after taking it lay down, became unconscious, and died before the arrival of a doctor. A *post-mortem* examination showed death to be directly due to hæmorrhage on the brain following the rupture of a blood-vessel. The jury having found that death was due to natural causes, the Coroner remarked that in regard to these cheap powders there appeared to be different kinds, some bearing distinctive names. The chemist who had been called was not able to say what some of them contained, and openly admitted that that fact was a secret of the makers. It was permitted by the law, and so long as the national finances were supported by revenue derived from payments in respect of secret remedies, the present unsatisfactory state of things would doubtless continue, and coroners and juries could not do more than protest.

A Peculiar Case.

At Clerkenwell Police Court on January 26, Edward Reynolds (30), chemist's manager, of 44 Highbury Hill, Highbury, was charged, on remand, before Mr. Bros, with being a suspected person attempting to pick pockets at the Agricultural Hall. According to the evidence of the prosecution, Reynolds was followed by Charles Day, the assistant manager of the World's Fair, for three-quarters of an hour. Mr. Day alleged that the prisoner placed his hands in the folds of ladies' dresses, and he finally gave him into custody. Mr. Drake (who appeared for the prosecutor) said in consequence of inquiries made, and of communications made to him by Mr. Ricketts (who was for the defence), it was not proposed to proceed with the charge. The prosecutor had no animus against the prisoner, and as a matter of fact he did not think he was justified in proceeding. A detective-sergeant said the result of police inquiries was that Reynolds had always borne a good character. He had been employed in several drug-stores in London, and had been regarded sometimes as eccentric. Mr. Ricketts said the prisoner had instructed him to say that nothing was further from his thoughts than dishonesty or improper conduct. He was the manager at one of Dodd's drug-stores, and had been employed by that gentleman for eight months. A large amount of cash passed through his hands, and he was scrupulously honest. His father farmed 600 acres in Gloucestershire, and he had two uncles who were magistrates in that county. One of his relatives recently died and left him 1500*l*. Mr. Bros said the prisoner's conduct was calculated to excite suspicion, and the authorities were quite right in giving him into custody. He would give the prisoner credit for not intending to act dishonestly, but he would advise him to be very careful with regard to his conduct in public places, especially towards women. Under the circumstances the prisoner would be discharged.

Morphine-fatality.—mvi. or m61?

An inquest was held at Bloxwich on January 26, by Mr. H. T. Stanley, the Walsall Coroner, respecting the death of an infant four weeks old. The mother of the child deposed that her sister-in-law took it to a hospital in Walsall, where she obtained a prescription from Dr. Oliver, which was taken to the shop of Mr. Frank Bannister, chemist, Bloxwich, where it was dispensed, Miss Bannister serving witness's sister-in-law. The child had the prescribed dose at 1 P.M., and ten minutes afterwards became ill and changed colour. Dr. Berry was called, but the child died the following morning at one o'clock. The sister-in-law corroborated. Miss Sarah Bannister stated in evidence that she consulted her brother, who dispensed the medicine. Mr. F. Bannister said his sister did not tell him the customer had said the mixture was for a baby. He supposed it was for the young woman's husband. It was a hospital-prescription, and was simply headed "Geo. Fellows," without indication as to age. In addition to a grey powder there was ordered a mixture to consist of bicarbonate of soda, 2 dr.; solution of muriate of morphine, 6 minims; glycerin, 3 dr.; water to 4 oz. Dose: Two teaspoonfuls every four hours. The quantities were expressed by symbols and Roman numerals in the usual way, but the quantity for the morphine-solution, "mvi," was written exactly like "m61," and he dispensed it with 61 minims. Dr. Berry brought back the prescription after the child had had a dose. After further scrutinising, and now knowing the patient was a child, he came to the conclusion the quantity intended was 6 minims. In hospital practice it was customary to state the age on a prescription for a child; in private practice the usual way was to write "Mrs. So-and-So's baby." Dr. Berry deposed to death being due to morphine-poisoning, and the Coroner remarked: "It is pretty clear that nothing was said about a baby when the medicine was ordered." The jury returned a verdict of death from misadventure through an overdose of morphia, adding that they thought the ages of child-patients should be stated on prescriptions, and exonerating Mr. Bannister from all blame.

Poisonings

The deaths from poisoning that have occurred since our last report number ten, only two of which were misadventures. In three cases hydrocyanic acid was the poison. Mr. Mordaunt Lawson, a son of Sir Wilfrid Lawson, Bart., M.P., was found insensible in a railway carriage at Wigton (Cumberland) with an empty bottle which had contained prussic acid in his hand. He died shortly after discovery, and at the inquest John Steel, veterinary surgeon, Wigton, gave evidence of supplying Mr. Lawson with some dog-pills and about 3 dr. of prussic acid "to poison a dog with."—Mr. G. R. Nelson, a surgeon living at Stamford Bridge, near York, was found dead in bed with a small bottle of prussic acid beside him. Medical testimony attributed death to the taking of the poison, Dr. Patten being of opinion that Mr. Nelson took an overdose through misadventure.—A printer named Pacy was found dead at Bracebridge, a suburb of Lincoln, on January 22. Traces of prussic acid were found in the stomach.—A young girl named Cutler, living at Aston took an overdose of laudanum to alleviate neuralgic pains and died.—James Mason of Barnsley died in the Sheffield Infirmary on January 20 from laudanum poisoning.—Hannah Carlisle, a Grimsby fisherman's wife, committed suicide on January 24 by drinking carbolic acid.—A farmer living at Assels, Watertown, Northam, poisoned himself with carbolic acid on January 22.—Sydney William Humphreys (11) ate some bread-and-butter "which was all green," and which he found in an empty house. He died in West Ham Hospital next day from collapse, "due to some irritant poison."—A jobbing gardener named Jackson, living at Flookburgh, died from strychnine-poisoning. A bottle which had contained strychnine was found in deceased's room, his wife stating that it had been in his possession for many years, he having used the poison for killing rats. At the inquest the Coroner (Mr. W. Holden) remarked that strychnine could not be bought in this country except under very great restrictions. He noticed, however, from the label on the bottle that it had been purchased in Philadelphia.—On January 22 an inquest was held at Birstall respecting the death of Thomas Lee (36), a factory operative. It was

stated that the man had been depressed, and on January 19 his wife found him lying on the floor of the pigeon-cote near the house, and he died before medical aid could be summoned. Deceased told his wife that he had taken a "mouse-powder." Mr. W. E. Knowles, chemist, Market Place, Birstall, stated that Lee called at his shop and asked for a "vermin-killer." Mr. Knowles asked him what he wanted it for, and "Who are you going to poison now?" Lee replied that he wanted it to kill mice. Deceased bought threepennyworth of the powder, which contained, besides other things, three or four grains of strychnine. Dr. Ogilby said death was due to poisoning. Suicide while of unsound mind was the verdict. —Mr. Whitaker Wright, of "London and Globe" notoriety, died on Tuesday an hour after he was sentenced to seven years penal servitude. He had taken potassium cyanide, apparently in tablet form.

Irish News.

Local newspapers containing marked items of news interesting to the trade are always welcomed by the Editor.

Good Drugs.

Sir Charles Cameron, drug-analyst, has certified that all the samples of drugs sent him from Carrick-on-Shannon Union were correct. One certificate being read, a Guardian remarked: "There is nobody to contradict him, at all events."

Personal.

Mr. S. McKinney, L.P.S.I., has been elected to the Cookstown Urban Council.

Mr. Stanley Harrington, J.P., a member of the firm of Messrs. Harrington, Cork, has been re-elected a director of the Munster and Leinster Bank, of which he has acted as chairman for the past couple of years.

Mr. R. F. McCartney, pharmaceutical chemist, The Medical Hall, 9 Diamond, Coleraine, was recently elected a member of the Coleraine Urban Council. Mr. McCartney, although a new candidate, was placed second on the poll.

Still Agitating.

The Kilkenny County Council have unanimously passed a resolution stating that "any restrictions put on the sale of sheep-dip would be seriously detrimental to the cleanliness of sheep, and that its sale should not be confined to chemists."

Virtue Rewarded.

A special grant of 5*l.* has been awarded to Sergeant O'Sullivan, of Ballinasloe, by the Board of Officers at headquarters in Dublin, for his good services, as food and drugs inspector, in the Ballinasloe district, especially in connection with the recent cases for the sale of sheep-dip.

Narcotic Poisoning.

The resumed inquest on the bodies of two children suspected to have died of narcotic poisoning at Strabane (*C. & D.*, January 9, page 41) took place on January 20. The report of the analyst (Professor Barklie, of Belfast) was read. It stated that in the stomach of the girl he found a quantity of opium estimated at 0.08 gr. In the case of the boy no poison was found. Medical evidence was given, and the parents of the children swore that no poison of any kind was within their reach. The jury found a verdict of death from narcotic poisoning in each case.

Poisoning-charge.

A woman named Mary McGrath was charged last week at Dugarvan with attempting to take her father's life by administering poison to him. The evidence showed that the prisoner gave some tea to her father on January 1, and he complained of severe illness and vomited after it. On January 11 he took some whisky given him by the prisoner, and again became very ill. It was shown that the prisoner purchased a quantity of perchloride of mercury mixed with charcoal in Dr. Ronayne's Medical Hall, Youghal, on

January 1. After arrest a paper containing a powder and a jar apparently containing rat-poison were found on the prisoner. The woman has been remanded.

Must Advertise.

Mr. James Fleming, L.P.S.I., Medical Hall, Athlone, writes to the local papers to contradict a statement that "neither of the local chemists keep McClintock's soaps for sale." Mr. Fleming states that he keeps McClintock's toilet, shaving, and tooth soaps, and regrets that Irish manufacturers do not advertise their soaps better, as any article must be known in order to be fully appreciated.

Business Change.

Mr. E. G. Flood, pharmaceutical chemist, has removed his business to 85 Clanbrassil Street, Dundalk, in the premises lately occupied by Mr. John Rea, ironmonger.

New Businesses.

Mr. George W. Walker, druggist, 136 Sandy Road, Belfast, opened on January 1 a neat drug-store on the Stranmillis Road.

Mr. W. H. R. Orr, druggist, York Road and Shankhill Road, Belfast, has opened a new drug-hall in Ormeau Road, which is in future to be his central dépôt.

Drug-tenders Invited.

The Governors of the Lunas District Lunatic Asylum invite tenders for the supply of medicines, &c., for twelve months. Tenders will be received up to the morning of February 8.

Instructions from Headquarters.

At the meeting of the Tuam Board of Guardians a letter was read from the Local Government Board stating that the drug-analyst had reported unfavourably on the tinctura gentiane composita and also on the sample of spiritus chloroformi sent him. They requested the Guardians to obtain an explanation from the contractor, and also to get him to replace these drugs by others of the proper standard. In the event of there being any delay on the part of the contractor in complying with the Guardians' request, they should call the attention of the Local Government Board to the matter. The letter also pointed out that the Guardians' report on samples of drugs delivered at the Headford Dispensary contained no reference to the date of their delivery. They asked that this defect be remedied, and that greater care should be exercised in future. The Guardians decided to comply with the suggestions contained in the letter, and directed that the quantities of defective medicine in stock be returned to the contractor.

Scotch News.

Local newspapers containing marked items of news interesting to the trade are always welcomed by the Editor.

Business Changes.

Mr. Wm. Cumming, chemist and druggist, has commenced business at 118 Spring Gardens, Abbeyhill, Edinburgh.

Mr. Robert Henderson, chemist and druggist, has purchased the business of Mr. Samuel Purves at 48 Haymarket Terrace, Edinburgh.

Mr. John Greig, chemist and druggist, Hilltown, Dundee, who succeeded Mr. Wm. Campbell there, has disposed of the business to Mr. G. M. Davie, recently dispenser in the Royal Infirmary. Mr. Greig has bought Mr. Armstrong's business at Maybole, Mr. Armstrong going to Glasgow.

The Attempt that Failed.

On January 19 an attempt was made to force an entrance into the shop of Messrs. Gibson & Co., chemists, 19 South Clerk Street, Edinburgh. Fortunately the attempt was unsuccessful. The middle pane of glass in the top half of the back shop window, which overlooks the area, was broken, and the catch was pushed back; but Messrs. Gibson, taking warning from the frequent reports of burglaries, had had the windows fastened from the inside, and the thieves did not succeed in entering.

Glasgow and Greenock Notes.

Mr. William Melrose has taken over the business of the late Mr. James Docker, chemist, Hamilton Street, Greenock.

A death from laudanum-poisoning is being investigated by the Glasgow police. The victim was Robert Gibb (36), residing at 106 Buccleuch Street.

It is said that there never was a time like the present when so many chemists' businesses in Glasgow are either changing hands or being offered for sale.

Here is a flower of rhetoric plucked from a local municipal council garden. One member described another as "a bald-headed Keating's powder." There are infinite possibilities of development along these lines.

Greenock Chemists' Assistants are to hold their annual dance in the saloon of the Town Hall on Thursday evening, February 11, 1904. It promises to be a great success. Tickets have sold well, and many of the masters have promised to be present.

The veterans of the golden years in the seventies are now a mere remnant of the once gallant band. An authority on the subject can only find two on the south side, and one in business on the north part of the city, who belonged to the palmy Price-list Days.

Several chemists have very tasteful and effective window-displays of the eucalyptus products of the Tasmanian Eucalyptus Oil Company, "Platypus Brand." The electric flash-lamp, scarf-pins, and other electrical novelties also figure on chemists' window-shelves all over the town.

The exhibition of pharmaceutical apparatus at the Glasgow Association meeting on January 21 was such a success that the committee are arranging for a show of optical goods on the occasion of Mr. R. Tocher's lecture on "The Pharmacist as Optician," next month, and a display of photographic apparatus, &c., in connection with Mr. H. P. Arthur's paper on "The Pharmacist as Photographic Dealer," in March.

Westward Ho!

Mr. Alexander Bertram, chemist and druggist, was entertained in the Melville Hotel, Edinburgh, on Wednesday, January 20, on the occasion of his leaving to take over the management of the English Pharmacy, Port of Spain, Trinidad. Mr. Duncan, Principal of the Royal School of Pharmacy, during the evening, on behalf of Mr. Bertram's friends, presented him with a valuable watch as a token of their esteem and regard. Toast, song, and sentiment followed, an excellent musical programme being gone through. Mr. Bertram served his apprenticeship with Mr. J. F. Tocher, Peterhead, and after qualifying remained in Edinburgh for the past four years with Messrs. Inmans (Limited), 1 South Clerk Street. Being endowed with a fine tenor voice, he has been a prominent member of St. Peter's choir, and has been much run after for "smokers and socials" generally.

French News.

(From our Paris Correspondent.)

PARIS SCHOOL OF PHARMACY—NEW SECRETARY.—M. Musson, one of the head clerks at the Ministry of Public Instruction, has just been appointed to the post of Secretary of the Paris Superior School of Pharmacy, in place of M. Madoulé, who died recently. M. Madoulé had filled the position for many years, and was the originator of that interesting annual, the "Guide Scolaire," a handbook containing full, official, and up-to-date information regarding curriculum, professors, examinations, scholarships, and, indeed, every point likely to be useful to the student or the simple inquirer. The duties of the Secretary of the School are mostly of a purely official character.

THE PARIS SOCIETY OF PHARMACY.—At the January meeting the chair was taken by M. Landrin, who, as Vice-President for 1903, has become President for 1904, and he suitably acknowledged his appreciation of the honour conferred on him. M. Landrin is connected with the wholesale trade, and a manufacturer of pharmaceutical preparations. He was elected a member of the Society in January, 1880.

He was supported by the new Vice-President, Dr. Auguste Béhal, who was warmly congratulated on his recent nomination as Knight of the Legion of Honour, and by M. Lépiniois, the recently elected secretary of the monthly meeting for the current year. M. Bourquelot, the General Secretary, informed the meeting that the late M. Leidié, one of their most respected members, had left a legacy to the Society, and he proposed that before any decision was taken the matter should be submitted to a committee for consideration. This was understood to be a mere formality, and was agreed to. A letter was read from Professor Moissan saying that he should consider it both an honour and a pleasure to continue to belong to the Society as an associate member. This disposes of the incident which followed the celebration of the centenary. There are only eight other associate members, who include M. Berthelot, M. Guignard, and M. Riche. There are now fifty-seven resident members of the Society. The senior member is M. Adrian, who was elected in 1860, and the junior is M. Dufau, whose election took place in October, 1903. M. Choay, the annual secretary for 1903, read an interesting account of the work of the Society and the events of last year connected with it.

PROFESSOR HALLER ON CHEMICAL INDUSTRY.—M. Albin Haller, Professor of Chemistry at the Paris Faculty of Sciences, needs no introduction as a leading writer on this matter. His two large quarto volumes on "Chemical and Pharmaceutical Industry" are the fruit of his duties as "Rapporteur" of Class 87 (Pharmacy and Chemistry) at the International Exhibition of 1900, and may be safely recommended to students of the fiscal and kindred questions. For the professor is a sturdy Lorrain who passed the best part of his life at Nancy, close to Solvay's and other chemical centres, and with a keen eye to what was going on scientifically and industrially, across the Rhine. He tells us that in Germany, between 1880 and 1901, the total of chemical imports remained stationary, while the exports increased from 200 million marks in 1880 to 363 millions in 1901. In 1891 raw and manufactured chemicals formed one-sixteenth of Germany's total imports; in 1901 but one-eighth. But, at the former as at the latter date, chemicals were about one-twelfth of the total exports of the empire. He adds that Great Britain, on the other hand, exported ten millions sterling in 1890, and only eight-and-a-half millions in 1898. The United States of America in 1898 imported 221 million dollars' worth and exported 48; in 1901 the imports were 283 millions and the exports 71. Russia increased her total production from 21 millions of roubles in 1887 to 59 millions in 1897—this represents one-fiftieth of the total value of her manufactures. French chemical industry seems flourishing since 1889. The 216 million francs of imports of 1892 increased to 250 millions in 1902; the exports were 217 millions in 1892 and 254 millions in 1902. Germany seems her only serious rival, and M. Haller examines the causes of her superiority. He first studies the question of natural mineral wealth. The Fatherland is evidently richly endowed; Stassfurt alone is a proof. But England's mineral riches are unequalled, save by the United States; the petroleum of Russia and America must also be considered. Water-power, all-important in the future, abounds also in the United States of America, though France has little to complain of on this head. Then comes the moral factor, and here M. Haller sees the explanation of much of Germany's power. In 1870 she gained self-confidence through victory, and applied it to her commercial enterprises. Her spirit is practical as opposed to French idealism. Perseverance, discipline, confidence of intellectual superiority, judicious advertising are some of her secrets of success. In France pure politics often prevent the interests of national industry being duly studied. The German works are presided over by a "trilogy"—the chemist, the engineer the business man; library, laboratories for research—nothing is lacking to perfect their equipment. They advertise in all languages, not forgetting Chinese, Japanese, and Persian. Frenchmen and Englishmen are good business men, but do not sufficiently realise that industry is an evolution (constant progress and change). Many inherit a business, are brought up, so to speak, in the factory, and know all its ins and outs, but they work in the old groove, do not perfect methods, and distrust technical men. Their travellers often lack sufficient technical knowledge to discuss the composition or application of a product thoroughly.

South African News.

(From our own Correspondents.)

Note.—THE CHEMIST AND DRUGGIST is regularly supplied by order to all the members of all the Pharmaceutical Societies in British South Africa, viz.:

SOUTH AFRICAN PHARMACEUTICAL ASSOCIATION.
PHARMACEUTICAL SOCIETY OF CAPE COLONY.
NATAL PHARMACEUTICAL SOCIETY.
TRANSVAAL PHARMACEUTICAL SOCIETY.
RHODESIA PHARMACEUTICAL SOCIETY.
NORTHERN DISTRICT CHEMISTS' ASSOCIATION.
PHARMACEUTICAL SOCIETY OF ORANGE RIVER COLONY.

MESSRS. ALLEN & HANBURYS (LIMITED), of London, have opened their South African branch at 33 Castle Street, Cape Town, under the management of Mr. T. W. Tillet.

DURING the nine months ending September 30, 1903, drugs and chemicals valued at 293,000*l.* were imported into Cape Colony compared with 303,000*l.* for the corresponding period of 1902.

MR. N. L. GOULDIE, chemist and druggist, Rustenburg, whose marriage we announced last week, served his apprenticeship with Mr. Charles Kerr, pharmaceutical chemist, Dundee, and was for some time with Messrs. Raimes, Clark & Co., of Edinburgh.

DR. WRIGHT, a well-known medical practitioner at Port Elizabeth, C.C., was before the Resident-Magistrate, on December 30, charged with rape upon a young girl of seventeen years of age, named Elizabeth Ochse. There is a great deal of excitement locally over the case.

CAPE TRADE-MARKS.—Messrs. Kynoch (Limited), Birmingham, are registering the trade-mark "Opex" in connection with explosive-substances in Class 20.—Messrs. A. E. Guttman & Co., the word "Micella" in respect of chemical-substances.—Messrs. Barclay, Perkins & Co. (Limited), a label device covering beer in Class 43.—The Imperial Tobacco Co. (of Great Britain and Ireland) (Limited), two marks, the word "Imperial" with the initials "I.T.C." under, and the initials "I.M.P." in Class 50, pipes, tobacco, &c.

NATAL SPIRIT.—Competition in the methylated spirit trade has been very keen of late in Natal, owing to new distilleries having opened up. The latest additions to the ranks are the Durban Breweries & Distilleries (Limited), and Messrs. Reynolds Bros., Esperanza. The result of this competition has been a decided advantage to the retailer, as the price has been reduced from 4*s.* to 2*s.* per gallon. The quantity of methylated spirit manufactured in Natal during November amounted to 2,447 proof gallons, and of rectified spirit to 812 proof gallons.

ORANGIA PHARMACY LAW.—Advices (dated January 4) which we have received from Bloemfontein stated that the Draft Pharmacy Law, referred to in the *C. & D.* recently, is expected to pass during the meeting of the Legislative Assembly now on. The new Pharmaceutical Society of the Colony was instrumental in getting the original draft of the ordinance thoroughly revised. The President and Council of the Society made several suggestions in the way of additions or amendments to the framers of the ordinance, all of which were accepted and embodied. After the first reading general dealers opposed very strongly the poisons clauses and the company clause, whereupon the representatives of the Society obtained an interview with the acting Colonial Secretary and the Attorney-General, with the result that the opposition was virtually squashed, and the company clause (which the Legislative Council had already decided to reject) was retained with slight alterations.

A NEW NURSING HOME.—Among the more recent additions to nursing homes or private hospitals in the Cape peninsula is the "Hygeia" at Muivenberg, on the shores of False Bay. Dr. F. H. Wessels, who was associated with the Claremont Sanatorium in its successful days, is interested in the establishment, and is the resident physician. As there has been just cause for severe comment on the nursing treatment extended to patients in private institutions throughout

South Africa, our correspondent, amongst others, was invited to go over the place. Although this is now used for operative and medical cases, it is intended to use the building as a seaside branch of a better-appointed sanatorium nearer town, where cases can be sent for change of air and scene. The Hygeia is fitted with electric and mineral baths, and is beautifully situated at the foot of the mountains. The headquarters of Dr. Wessels, when the new premises have finally been decided upon, will be replete with everything that goes to make a hospital; and the necessary appliances, instruments, &c., will be imported from Europe and America.

CAPE DRUGS.—The report of Mr. C. F. Juritz, the senior analyst of Cape Town, for the quarter ended September 30, 1903, states that the total number of samples analysed by him under the Sale of Food and Drugs and Seeds Acts, 1890, at Cape Town and Graham's Town was 589, of which 127 were found to be adulterated, and fines amounting to 189*l.* 17*s.* 6*d.* were made. Condiments formed the bulk of the samples taken, but there were also nine samples of iron-pills (four of which was adulterated), one sample of cinnamon (adulterated with 10 per cent. of sand), four samples of honey (each adulterated with 19 per cent. of sugar), one sample of cream of tartar (genuine), six samples of olive oil (one adulterated with cotton-seed oil), six samples of mustard (four of which were adulterated with flour coloured with turmeric), one sample of turmeric (genuine), nine samples of tincture of iodine, three of Epsom salts, eleven of spirit of camphor, and one of compound liquorice powder (all genuine). The offending iron-pills samples were deficient in ferrous carbonate in amounts ranging from 39 per cent. to 62 per cent.

CHALLENGING CHAMPION.—Mr. G. A. Champion, President of the Natal Pharmacy Board, and a prominent town councillor of Durban, has had rather an exciting experience as a member of the Licensing Board appointed by the Corporation. For some time Mr. Champion, who has always taken a deep interest in the religious and social welfare of the town, has been a lay representative to the Durban Church Council, an organisation which is composed of most of the leading men of the various religious bodies in the town. The solicitor for an applicant requiring a licence challenged the right of Mr. Champion to sit on the Licensing Board, as he is a member of the Durban Church Council, which had passed a resolution directing the chairman and secretary of Council to attend the meeting of the Licensing Board in order to oppose all licences. It was therefore contended that Mr. Champion had no legal status on the Board, and that in giving judgment in several applications he had acted *ultra vires*. The Licensing Board retired to consider the point, and eventually adjourned for a few days to place the matter before the Town Council, who upheld the right of Mr. Champion to sit on the board. The matter is now being taken to the Supreme Court for final decision. In consequence of this "breeze," Mr. Champion has been subjected to a good deal of criticism in the Press.

American Notes.

RADIUM.—The "New York Commercial" reports that two discoveries of radium have been made in Utah and Idaho by James Lawrence, a geologist and mining expert. The new prospect shows large quantities and is in Carbon County. Lawrence will go to Idaho to investigate further deposits.

COD-LIVER-OIL ACTION.—With reference to the publication of the circular recently issued by Mr. Edward P. Hals to the cod-liver-oil trade (particulars of which have appeared in THE CHEMIST AND DRUGGIST), we now learn that Mr. Trygve Jervell, trading as Messrs. O. S. Jervell & Co., cod-liver-oil manufacturers and refiners, is bringing an action for libel, claiming \$60,000. It may be remembered that the circular stated that Mr. Jervell imported into Norway some six hundred barrels of Newfoundland and other cod-liver oil, which, after having been "duly doctored and naturalised," was shipped to the United States and England as finest Norwegian cod-liver oil.

ADULTERATED DRUGS.—Mr. Lyman F. Kehler, chief of the drug-laboratory in the Agricultural Department at Washington, has prepared a lengthy bulletin dealing with the adulteration of chemicals, drugs, and allied products, and the trade therein. The bulletin shows that besides a good deal of intentional adulteration there is much carelessness in passing off low qualities of chemicals and drugs, but occasionally the writer gives indications that he is a purist. The complaint of New York retail druggists that large department stores sell too cheap, and cannot supply pure and honest drugs at the prices they charge, led to an investigation by the State Board of Pharmacy, with the interesting result that not one instance of the violation of law was discovered in connection with the drug dispensation of these great establishments.

FREE-ALCOHOL CAMPAIGN.—A Bill to be presented to Congress is being drafted by Commissioner of Internal Revenue Yerkes, which, if adopted, will remove the heavy internal tax on alcohol used in the arts and manufactures. Those who are behind the proposition to repeal the tax on this class of alcohol say that it will be worth \$50,000,000 a year to the manufacturing interests of the country, and that it will have practically no influence in reducing the revenues of the government. In addition to the above Mr. Boutill, of Illinois, a prominent member of the Ways and Means Committee, introduced in the House bills providing for a reduction in the tax on distilled spirits from \$1.70 to 70c. per gal., and permitting the withdrawal free of tax of denaturised spirits for use in the arts and industries. The bills have been drafted by the Committee of manufacturers having the duty-free alcohol in charge. Both bills have been referred to the Ways and Means Committee, and will be carefully considered at an early date.

BROMINE.—The production of bromine in the United States during 1903, including the quantity of bromine contained in potassium bromide, amounted to 603,500 lbs. valued at \$172,000, as compared with 513,890 lbs. valued at \$128,472 in 1902, an increase in quantity of 89,610 lbs., and in value of \$44,528. The price of bromine during 1903 has been very erratic, beginning the year at 25c. per lb. and going as high as 40c. for a few lots in July and August; towards the end of the year it has been quoted at 30c. The average for the entire year may be taken at 28 1/2c. per lb. More than one-half of the total output was furnished by Michigan, which contributed approximately 270,000 lbs. in the form of potassium bromide and 56,500 lbs. in the form of liquid bromine (total, 326,500 lbs.), as compared with the respective quantities of 165,000 lbs. and 61,452 lbs. (total, 226,452 lbs.) for 1902. The chief producer in Michigan is the Dow Chemical Company at Midland. An interesting note in relation to the development of the bromine industry is the establishment of salt blocks near St. Charles, south-west of Saginaw, to obtain salt from the Marshall brine by utilising waste coal. According to Professor Alfred C. Lane, the wells have been sunk to a depth of 832 feet, and cased 540 feet. Bromine is reported to be extracted from the bittern of the salt to the extent of 100 lbs. daily.

A NEW POISON-LAW.—The State of Alabama has just propounded a new poison-law. It provides that:

It shall be unlawful for any person to retail arsenic or any of its preparations, corrosive sublimate, white or red precipitate, biniodide of mercury, cyanide of potassium, hydrocyanic acid, strychnia, or any poisonous vegetable, alkaloids or their salts, or the essential oil of almonds, opium or its preparations, except paregoric, and other preparations of opium, containing less than 2 gr. to the ounce, aconite, belladonna, colchicum, conium, nuxvomica, henbane, cotton-root, cantharides, creosote, veratrum, digitalis and their pharmaceutical preparations, croton oil, chloroform, chloral hydrate, sulphate of zinc, mineral acids, carbolic or oxalic acids without labelling the box, vessel or paper, in which the said poisons are contained with the name of the article, the word "poison," and the name and place of seller, and enter in a book kept for that purpose the name of the purchaser, the date of sale, the name of the poison and quantity purchased.

These restrictions do not apply to poisons sold on prescription. The druggist must also find that the purchaser is aware of the poisonous character of the article, and the sale can only be made when the latter "represents" that the poison is for a legitimate purpose. The penalty for breach is from \$50 to \$250.

Colonial and Foreign News.

PHARMACY IN BULGARIA.—The National Assembly has finished the discussions on the proposed Public Health Bill. It orders, amongst other things, that in future no one in Bulgaria can be owner of more than one pharmacy.

EXPLOSION IN A MOSCOW HOSPITAL.—Recently while experiments were being made in the dispensary of a Moscow hospital with iodoform and the air was charged with ether, an explosion suddenly occurred, and fire followed. The chief chemist, Isaev, with the aid of his assistants, put out the fire in a few minutes. Mr. Isaev was badly burned about the face and hands, and his two assistants were burned all over the body.

RUSSIAN PETROLEUM.—The production of petroleum in the Baku district during 1903 shows a considerable falling-off as compared with the years immediately preceding it. It is calculated that the output amounted to 595 million poods, as against 637 millions in 1902, 672 millions in 1901, and 630 millions in 1900. During the first eight months of 1903 the prices of naphtha remained low, but in the later months a perceptible improvement took place.

SWISS CHOCOLATE.—The manufacture of milk-chocolate has during the last few years developed into an important industry in Switzerland. Since 1896 the exports have increased from 140,000% to about 725,000%. The home consumption has also considerably increased, and at the present time there are about two dozen factories engaged in this industry, which is greatly increased during the summer months owing to the large influx of visitors. In 1902 the exports to the United Kingdom amounted to 350,000%, or nearly 50 per cent. of the total exports.

SACCHARIN IN SPAIN.—The Board of Trade are in receipt of a translation of a Spanish law, dated December 24, 1903, prohibiting the importation, manufacture, and sale of saccharin and analogous products, and of alimentary substances, heverages, and all articles which contain saccharin and analogous products, as well as mixtures of glucose and sugar. An exception is made in the case of saccharin and similar products imported for medicinal purposes; such importations must, however, be effected through the Custom houses specially designated for the purpose.

THE FORBIDDEN BEAST.—The Sultan of Turkey having recently discovered that lard is used in making various cosmetics, pharmaceutical preparations, and perfumes, has forbidden the importation of such unclean articles, and has granted licences to various people in Turkey to produce medicines, perfumes, soaps, &c., on the spot. The manufacture is carried on under supervisors, who guarantee that the articles meet the Koran's requirements, and the Mohammedan priests widely advocate the use of these orthodox goods. Turkish raw materials only may be used.

RUSSIAN MINERAL WATERS.—Mr. Dolgopulovo has been lecturing at Piatigorsk according to the "St. Petersburg Pharmaceutical Journal" on the reasons why Russian mineral waters are so little sought after. He finds that Russian doctors know very little about those waters, "which are inferior in no respect to foreign mineral waters in curative properties." He urges that the Caucasian waters be put under a fresh administration and he pointedly brought under the notice of the doctors. Above all, however, he urges that special railway rates be conceded for carrying the waters.

PROPRIETARY ARTICLES IN GERMANY.—The "Pharmaceutische Zeitung" states, in reference to the new regulations regarding secret remedies in Germany, that all those included in the lists of the Federal Council will be reintroduced into trade under other names or designations. Two new pain-exPELLERS have already appeared, described as "Free-saleable Pain-exPELLER," or "For use for animals." An Omega mineral-naphtha has been brought out as a new remedy for rheumatism, glycosolool has come into existence again as Dr. Meyer's diabetes-remedy, and the Noortwycksche diphtheria-remedy as "Noordyl." A new wine called "Salus" has taken the place of the prohibited Ullrich medicinal wine.

Winter Session.

Glasgow and West of Scotland Pharmaceutical Association.

THE monthly meeting was held at 94 West Regent Street, Glasgow, on Thursday evening, January 21, Mr. W. L. Currie (President) in the chair.

The opening hour was spent by the members in examining an interesting exhibition of pharmaceutical apparatus lent by Messrs. Allen & Hanburys (Limited), S. Maw, Son & Sons, and Parke, Davis & Co. Among the exhibits shown were a "Phenix" emulsifier, a tincture-press, a tablet-mould, Whitall, Tatum & Co.'s machine for making suppositories in the cold, a tablet-making machine, a personal weighing-machine, Allen & Hanburys' "Novum" dispensing-balance, a cachet-machine, Fairbank's dispensing-machine, &c. The thanks of the Association were awarded to the firms named for their interesting loans.

THE VALUATION OF DRUGS.

This was the subject of a short paper by Mr. T. Maben, which was read by the SECRETARY (Mr. Gilmour). The author insisted that the more the pharmacist knows at first-hand of the drugs he uses, the more confidence he will have in himself and his products. He showed that the value of drugs is not necessarily commensurate with their commercial prices, and that valuation really depends upon therapeutic or medicinal value. Owing to variation in such value by natural and other causes, it is requisite to determine uniformity in activity by some means. Some claim that one alkaloid is a sufficient basis on which to assess value; others that the total alkaloids are necessary. Some say that there are principles even in alkaloidal drugs other than the alkaloids that deserve consideration, and still others who say that in drugs which possess active principles the extractive is no guide to efficacy. The author submitted analytical factors to show that variation exists in the content of alkaloids, glucosides, resins, volatile oils, or other substances to which the activity of the drugs is due. He then discussed the question how far pharmacists can be held responsible for the quality of drugs variable in these respects. He considered that until the British Pharmacopœia lays down authoritative instructions in every case it will be an absolute *non possumus* for the pharmacist to test all crude vegetable-drugs handled by him, but as a *via media* he suggested that in the preparation of tinctures the use of standardised liquid extracts is a safe course to pursue.

THE PRESIDENT said Mr. Maben laid himself open to considerable criticism by putting in a plea for large manufacturing houses. The British Pharmacopœia, Mr. CURRIE thought, is good enough for the retail pharmacist in the meantime. If they adhered closely to what the Pharmacopœia gave them, they did pretty well. They unfortunately came across preparations of various makers which were rather confusing to retail pharmacists, and he thought it was a pity there was so great a flood of such things on the market.

THE PHARMACIST AS FOOD-SPECIALIST.

MR. J. P. GILMOUR (Secretary) contributed a brief note on this subject, remarking at the outset that it was the second of a series of papers arranged for this session on pharmacists' side-lines. He had not heard any very hostile criticism on the enterprise of pharmacists in taking up these side-lines to their business; on the contrary, there had been a great many friendly references to it. But he could conceive of hostile criticism to it. On the one hand, he could imagine the superfine pharmacist who resides in the neighbourhood of Bond Street saying these side-lines did not belong properly to pharmacy at all; that to be professional pharmacists who practised pharmacy pure and simple they should have nothing in their window; that they should just describe their legal qualification, and not advertise at all—just to wait, as it were, for their customers to find them out. He had a great deal of sympathy with that. Theoretically, that was what pharmacists should be. But there was no great prospect of their attaining to that beatific state on this side of Jordan.

What they had to do was to earn a living, and meantime they had to pay rent and taxes, and therefore they had to have recourse to these side-lines. Of what use was the scientific knowledge they had acquired, in preparing for the Minor and the Major, if they did not apply it practically in their business, applying it, for instance, in such directions as making a speciality of urine-analysis, in specialisation as to foods, in photography, and in practical optics? But when they did try to apply to practical purposes this scientific knowledge they possessed, they were between the devil and the deep sea, for they pleased neither the professional pharmacist nor the medical man. There is a type of medical man at present who claims the whole universe as his own property. He would not permit anyone to offer advice who did not have his own medical qualification. "Such a man would tell you," said Mr. Gilmour, "that you have no business to examine a person's eyes. The medical man alone, he asserts, has that right. Now, I resent that intrusion into our domain. The medical man has no right to invade our rights. We endeavour to respect his. In this part of the country he is allowed to keep open shop, and he exercises that right for all it is worth, and yet the same men refuse us our legal right to prescribe. I have the same legal right to prescribe as medical men have. There is no power in the Medical Acts which restricts the practice of medicine to medical men." Mr. Gilmour then pointed to two directions in food-specialisation, to which chemists might profitably apply their scientific knowledge—in the preparation of infants' food and invalids' foods, promising that there was no subject more peculiarly the chemists' own than the analysis and composition of foods and dietary generally. It was for a medical man to say in a particular case what kind of food an infant or an invalid should have; but, apart from that, the subject of alimentation and of the kind of food suitable for invalids who were not directly under medical treatment were matters that the pharmacist, with his special knowledge and skill, was quite qualified to deal with. Taking infants' food first of all, the ideal food for a child was its mothers' milk, although recent investigation showed that the mother's milk was not always suited for a child—it sometimes contained bacteria. But in many cases mothers will not or cannot feed their children from the breast, and the chemist had to find a substitute for the mother's milk. Cow's milk was not suitable, as it contained an excess of proteids. But there were quite a number of ways by which milk could be humanised—made to imitate the human milk. In a paper which was published in THE CHEMIST AND DRUGGIST in September, 1902—which he had prepared in collaboration with his brother-in-law, Dr. Forrest—he gave a simple formula by which it was quite an easy matter to adjust the proportions to children of different ages—a preparation of humanised milk—and he found that he could work up a profitable business in making and selling that preparation of infants' food. It was a fact of experience that it was not possible to keep a child in a state of health by feeding it on artificial food. Some of them were deficient in fat, and some of the foods that were sold were simply poisonous, because they contained large quantities of starch, and starch could not be digested by a child until it was nine or ten months old. Then as to invalids' foods, a chemist could do a great deal more than he did. What the chemist should do was to acquire a more intimate knowledge of the varieties and preparations of such foods than he did. He might specialise a little more in that line, and be able to give a little more detailed information to people who asked him for advice. It might be worth his while to take some lessons in cooking; for instance, he made beef-tea and prairie oysters. Then there were no end of good drinks and good beverages—beverages for slaking the thirst and quite unobjectionable from a clinical point of view. If pharmacists cultivated this side-line more assiduously than they did, they might make a profitable branch of business out of it.

In opening a brief

DISCUSSION

on the subject of foods the PRESIDENT jocularly remarked that it was rather an encouragement to the pharmacist to sell artificially-made foods, because they produced a great deal of infantile diseases, with the result that the medical man had to prescribe. While he was not in favour of refusing to

sell artificially-made foods, he admitted it was a very great shame that more attention was not paid to the better feeding of infants. There were very few mothers indeed who could not feed their own children, but it was the fact that many of them will not. It seemed to him that the tendency in this twentieth century was more than ever for mothers to give up feeding their children from the breast. Mr. Gilmour was also quite right in saying that chemists ought to pay more attention to specialising in invalids' foods. Pharmacists were asked every day for invalids' foods, and they might find it to their advantage to give advice to customers on that point. Mr. Gilmour mentioned beef-tea, but he did not say how they were to prepare it. He would like to know what was Mr. Gilmour's method of preparing beef-tea, for he (Mr. Currie), too, had a method of his own. There was a great deal to be said in favour of what Mr. Gilmour had stated about food-specialisation, and he hoped they would all profit by it and grow fat upon it in more ways than one. (Laughter.)

Mr. MOIR said they all recognised Mr. Gilmour as an authority on infants' food, and he hoped that at some future time he would treat the subject in more detail, because he believed that Mr. Gilmour could give them a great deal of valuable information upon this department of business.

Mr. ROBERTSON remarked that if chemists were able to show medical men that they could advise patients as to the proper foods to use, or lay down a system either for the better feeding of infants or in the preparation of invalids' foods, they would find that the medical men would gladly substitute the preparations so much advertised now for the foods prepared by the chemists themselves. In the past chemists had been lax in taking up that line of business.

Mr. MACKAY thought that the food suitable for invalids must be left very much to the medical man. He had to diagnose their illness, and would rather resent the chemists' treatment of a patient if they were to recommend any particular food. As to infants' food, it would be rather an uphill job for most chemists to make much of this humanised-milk sale. The milkman was there, and women will get special cow's milk for baby. Mr. Gilmour might get his pockets lined over it, but others would have to look on.

Mr. BRODIE said he occasionally had to advise mothers as to feeding their children. Mothers sometimes came to him about the baby's bowels or its stomach; and on asking what food they were giving the baby, most of them said cornflour or arrowroot. He had taken the opportunity of telling them that they were starving their young children with food of that kind, and advised them what food to use. But, added Mr. Brodie pathetically, it is such a difficult thing to advise women—(laughter)—they will have their own way. (Laughter.)

Mr. GILMOUR, in replying to the criticism, promised that at some future time he would deal with this subject in more detail. His recipe for beef-tea was this: Get good lean beefsteak, cut it in small pieces or shred it, and let it steep in cold water for an hour or so, with a very little salt; then raise it slowly almost to the boiling-point, or to the boiling-point, or let it simmer near the fire.

The PRESIDENT: That is also my method, but my usual way is shredding.

Mr. ROBERTSON pointed out that Mr. Gilmour's paper was very opportune, because a committee of the Glasgow Town Council had just been appointed to deal with the subject of the feeding of infants.

THE PHARMACEUTICAL BENEVOLENT FUND.

The PRESIDENT called attention to the fact that the Pharmaceutical Benevolent Fund is greatly in need of more financial support, and made a strong appeal to the chemists of Glasgow to lend their aid in placing the fund in a more satisfactory position. Since he had gone up to London as their representative on the Council he had seen the excellent work that was being done by the fund, and he could say that it is a most deserving object.

Mr. MOIR said he sympathised very deeply with the position the Benevolent Fund found itself in, but attributed that largely to the action of the Council in abolishing the system of collecting subscriptions by means of the district secretaries. (Hear, hear.) If the Benevolent Fund was to be the successful institution it ought to be, the Council must revert to the old system; no other way would do. He

thought Mr. Currie ought to lay that before the next meeting of the Council.

The PRESIDENT said he had put that matter before the Council more than once already. He felt the council had made a great mistake in taking away the duty of collecting subscriptions from the local secretaries.

Bournemouth Pharmaceutical Association.

A MEETING was held at the rooms of the Association on January 21. Present, Mr. Morris (in the chair), and Messrs. Hughes, Pars, Hornby, Aitken, Toone, Jarvis, Reid, Bingham, Scampton, Botham, Bilson, and Rose (Hon. Secretary). The SECRETARY read replies he had received to letters he had been ordered to write at the last meeting, and also reported that Messrs. Savory & Moore had sent no reply to his letter. The evening was essentially a "local" one. Members first considered the advantages of a scheme of local price-protection, but after some discussion it was felt that the present moment is not an opportune one for launching such a scheme.

The appointment by the local authorities of a "Bournemouth Advertising Committee," and the difficulty of obtaining supplies of benzene, &c., by rail, and other matters, were discussed; but it was felt that, as an Association, little could be done in these matters. The SECRETARY then drew attention to the unsatisfactory state of the Pharmaceutical Benevolent Fund, and asked whether the Association could not make an effort to send up a record amount this year? It was decided to ask members to pay their subscriptions through the Association, and as far as possible to make a personal appeal to every registered person in the district. Several members volunteered to help the Secretary in the canvassing. A sum of over 4*l.* was subscribed among those present to "start" the fund. The next meeting of the Association will be held at its rooms on Thursday, February 18, when Mr. C. F. R. Pars is to open a discussion on "Co-operative Buying."

Three Towns Chemists' Association.

A MEETING was held at 7 Whimble Street, Plymouth, on January 22, Mr. J. Barge (President) in the chair. Among those present were Messrs. Freeman W. Hunt, R. F. Roper, F. A. Goodwin, Condy U'Ren, S. A. Perkins, H. M. Morgan, and G. Fairweather (Hon. Secretary).

The minutes of the last meeting being read and confirmed, the CHAIRMAN said it had been thought desirable to discuss the suggestion of holding an "at home," or social evening, where the members of the Association would act as hosts, and be enabled to invite their friends, both ladies and gentlemen. Mr. S. A. PERKINS inquired if dancing would be included in the programme; but the CHAIRMAN said he did not think it would be wise to have dancing, as the affair was intended to replace the ball. Mr. ROPER suggested that a committee be formed to obtain information as to the probable cost, and allow them to decide whether such a reunion would be approved of; and the following members were asked to make the necessary inquiries: Messrs. Barge, Park, Weary, Maitland, Woods, Perkins, Goodwin, Spear, Morgan, and Fairweather.

THE C.O.D. POSTAL SYSTEM.

The CHAIRMAN said this subject had been discussed at meetings of chemists throughout the country, and he thought it would be advisable for an expression of opinion to go forth from the Association. He himself was not in favour of the scheme, as he considered it placed a strong weapon in the hands of large firms, which would be detrimental to local chemists. Mr. ROPER thought it would be of service to large districts, but would enable manufacturers to deal direct with customers, and they as middlemen would be ignored.

Mr. HUNT said the only objection he could see to the scheme was that it would be necessary to pay for articles before the purchaser had an opportunity of examining them, but he thought this difficulty could be obviated by having a system of deferred payments.

Mr. ROPER instanced a case, when the parcel post was first introduced, where a chemist in a fashionable health-resort lost a considerable amount of his dispensing connection

through customers, after consulting London physicians, being recommended to take their prescriptions to certain London chemists, who availed themselves of the parcel-post facilities, and dealt direct with the patients; and he would therefore move that—

The opinion of this meeting is that the cash-on-delivery postal system would operate to the disadvantage of local chemists as a body, although it would remove some of the difficulties under which postal trade is at present carried on.

After further remarks from Messrs. CONDY UREN, PERKINS, and GOODWIN the resolution was unanimously adopted.

OTHER MATTERS.

Mr. ROPER thought the Association should express an opinion on the very small profits offered by Messrs. Savory & Moore, who had just placed their goods on the P.A.T.A. list.

Mr. Park, who was unable to attend owing to a severe cold, wrote suggesting that members of the Association should discuss, and, if it was thought advisable, take action in regard to firms who, it was reported, gave preferential terms to certain competitors.

After a little discussion it was decided to bring the matter before the next meeting.

Northampton Chemists' Association.

The monthly meeting of this Association was held at the Black Boy Hotel, Wood Hill, Northampton, on January 22, Mr. Evan C. Ashford (Vice-President) in the chair. The CHAIRMAN expressed his regret at the absence of the President (Mr. Mayger) through indisposition.

The HON. SECRETARY (Mr. F. Cowdery) replied that Mr. John Bingley, J.P., for many years Divisional Secretary of the Pharmaceutical Society, had written thanking the Association for their resolution of appreciation of his services in that capacity.

Mr. W. McKINNEL and Mr. G. INGLE made appeals on behalf of the

BENEVOLENT FUND

of the Pharmaceutical Society. Mr. McKinnell said that the fund was doing a magnificent work in helping chemists who had met with misfortune at a time of life when they could not regain lost ground, to say nothing of its splendid work among the widows of chemists. Mr. Ingle pointed out that the Benevolent Fund stood in urgent need of more funds, and he appealed for double subscriptions. It was agreed that the Hon. Secretary, with Mr. Donald McKinnell (the new Divisional Secretary) be asked to appeal to the chemists of the town and county of Northampton for subscriptions.

A resolution from the Reading Chemists' Association urging that steps be taken to induce certain manufacturers of proprietary articles, whose articles are subject to extreme cutting, to place these goods on the P.A.T.A. list was adjourned for consideration at the next meeting.

North Staffs Chemists' Association.

A MEETING of this Association was held on January 21, at the Roebuck Hotel, Stoke-on-Trent, Mr. J. Aveill, J.P., of Stafford (President), in the chair. There were also present Messrs. T. C. Cornwell, Vice-President (Hanley), Edmund Jones, Hon. Secretary (Hanley), Weston Poole, Treasurer (Newcastle), T. Bentley, Assistant Hon. Secretary (Hanley), R. G. Emery and W. B. Allison (Stoke), T. Charles, A. Fernley, and B. Parker (Burslem), A. F. Bottomley (Hanley), and C. P. A. Morrison (Newcastle).

The PRESIDENT opened a discussion on

TERRITORIAL REPRESENTATION.

He thought the present mode of electing members of the Council was a sort of haphazard method, and not nearly so good as that suggested by Mr. Tocher. He thought by that means each district, having a representative belonging to it, that representative would be much more in touch with the members of the trade there than at present. The representative would also have opportunities of attending from time to time the meetings of the different Associations, and might thereby gain information which would be, in the speaker's opinion, most valuable to the Council in Blooms-

bury Square. The scheme brought forward by Mr. Tocher was one of which he thoroughly approved, and which, he thought, would meet the requirements generally throughout the country. The question of the division of the districts must be carefully considered. In some thickly-populated districts there would be a less area to be covered than in the more sparsely-populated districts, but that question would be capable of satisfactory adjustment. He hoped the subject would be discussed among the various Associations throughout Great Britain, and in the end, if there was a majority in favour of the scheme, the Council might consent to it, and let it be the mode of electing representatives.

Mr. W. B. ALLISON then moved a resolution approving generally of Mr. Tocher's scheme. He thought that more interest would be engendered by the scheme. Looking backwards to various elections, they saw that only about half of those entitled to vote exercised the privilege. If the matter of elections were brought nearer home more interest would be infused into them, and even perhaps a little enthusiasm—(hear, hear)—and this could not fail to react for the benefit of the Society and the trade generally. (Applause.)

Mr. EMERY seconded.

Mr. EDMUND JONES said he was glad this subject had been at last brought forward. Mr. Tocher's scheme was, in the speaker's opinion, far above the head of the ordinary pharmacist, and it required a mathematical mind to be able to follow all the intricacies of this most elaborate scheme, which, if carried, would be to the advantage of the craft in general. They had had to lament for years past that there had not been sufficient interest taken in the Society. They had complained of the paucity of membership, and there was something wanting to develop a deeper interest in matters pharmaceutical and to induce members to join the Society in larger numbers. He thought Mr. Tocher's scheme, if carried out, would have a very good effect in the direction desired. If this scheme were carried out they would have a constituency from which they could send their own representative, and to which this representative would have to give an account of matters in due time. By that means they could keep their representative well posted up in all local needs, and if any local members had grievances the representative might discuss the grievance with them when he visited their particular Association. It was, as they remembered, through Mr. Newsholme that the present system of appointing secretaries in each particular district was adopted. How, therefore, could he (Mr. Newsholme) reconcile his present position as an opponent of Mr. Tocher's scheme? It seemed to him that the two schemes were practically on all fours. He did not think there was much in the argument that by Mr. Tocher's scheme some of the old champions of the Society would stand a chance of being left out in the cold. Many of these men had done such good service that no one could overlook them and wish to exchange them for untried members.

Mr. T. C. CORNWELL thought the time was not yet opportune for pressing forward this measure. The Society had a tremendous lot on hand just now, and he thought therefore the scheme might stand over a little longer. Territorial representation appeared to him to be one not simply of territory, but heads. The only good reason he saw for a change was that it might introduce new blood. In their community there were men who could very well replace some of those already on the Board; some of the old, and, he thought, some of those in very high places, might very well be replaced by men who were more cognisant of the changes of the times. As regards the paucity of membership, where there was a certain subscription there was always a large body of men who never would pay it. Comparatively, he thought their own Society compared favourably with similar ones, and it was fortunately at the present time increasing in numbers.

Mr. WESTON POOLE did not approve of the scheme at the present time, and he could not see where the advantage was coming in. There were great difficulties in the way. The Pharmaceutical Society had only one object, and that should be the same whether the representatives lived in the North or South of England. They were simply joined together in the Society, as the Act told them, for (1) the safety of the public, (2) to administer the Pharmacy Act, and (3) their Council should urge legislation as far as possible in their

interests. Those three objects, he contended, were the same in all parts of the country. At the present time their representatives were continually visiting Associations in different parts, and the views of chemists generally were sent up by resolution to the Council. He therefore did not see the necessity for sending up any particular representative. He did not want to see any "carpet-bag" representatives. He did not believe either that under Mr. Tocher's scheme any greater interest would be taken in the election of the members of the Council. He did not think that because a man was chosen to represent a certain geographical district, he was going to make any better councillor, providing he had, in the first instance, the interests of the Pharmaceutical Society at heart. Their councillors were not parochial, but national; and they did not want to bother a councillor over parochial affairs, but wished him to find out what was best for the chemists and druggists in the country as a whole.

The PRESIDENT having briefly replied, the motion was put to the vote, and there were eight for and one against, some members remaining neutral.

Mr. H. P. Jones, of Stoke-on-Trent, was proposed by Mr. T. C. CORNWELL as a joining member.

The PRESIDENT next brought forward the question of the

BENEVOLENT FUND,

and made a strong appeal for support, pointing out that the Society had recently granted 20*l.* to a distressed brother in their own district.

The hat was passed round, and 1*l.* was subscribed by the members.

The question of arranging a chemists' ball was again mooted, but it was thought that a sufficient number could not be obtained to make it a success; so it was suggested that a pic-nic should be discussed for the summer months.

Poor-law Dispensers' Association.

A GENERAL MEETING was held on Friday evening, January 22, at Surrey House, Victoria Embankment, W.C., Mr. M. G. Smith, Lewisham Infirmary (President), in the chair.

The President was selected as delegate to the Council meetings of the National Poor-law Officers' Association, the next meeting to be held at Reading in March.

Mr. G. W. LINDSAY, M.P.S. (Camberwell Infirmary), then read a short paper on

GLASS AND GLASS BOTTLES.

Mr. Lindsay said glass doubtless owes its origin to chance, according to Pliny. Sidon was the first city distinguished for its glass-works, but the manufacture of glass was not introduced into Rome until the reign of Tiberius. The ancient Egyptians carried the art to the highest perfection, and are known to have practised it as early as 1600 B.C., if not earlier; they are said to have performed the most difficult operations in glass-cutting. The Venetians were long celebrated for their glass-manufacture, the works having been established before 700 A.D. Germany and France succeeded to the pre-eminence. Britain did not become distinguished for her glass until about the commencement of the sixteenth century, when the manufacture of window glass was begun in Crutched Friars in 1557. The British Plate-glass Company was established in 1773 at Ravenshead, in Lancashire. Before this time all the plate glass was imported from France, but this country manufactures glass superior to any other nation in Europe. Glass is formed by the fusion of silicious matter such as powdered flint or fine sand, together with some alkali, alkaline earth, salt, or metallic oxide. Five kinds are usually recognised in commerce: (1) Bottle or coarse green glass; (2) broad spread or sheet window-glass; (3) crown or the best window-glass; (4) plate glass or glass of pure soda; (5) flint glass or glass of lead; and coloured glass may be mentioned as a sixth kind. "Glass houses" are commonly constructed of brick, of a conical shape, the diameter at the base varying from 80 to 100 feet, the perpendicular height being much the same. The furnace is constructed in a large vault in the interior of the cone, and separated from it by an iron grating, on the upper side of which the fuel is laid. Three different kinds of furnace are employed by the glass-maker: (1) The "calcar," or fritting-furnace, in which the materials used

are calcined, and chemical union commences, forming what is called a frit. (2) The working-furnace, in which the frit is placed in earthen pots or crucibles, is melted, and formed into glass. These crucibles are formed of Stourbridge clay, well washed and welded together with warm water to the consistence of paste; they are carefully dried by heat and then baked in a furnace, the heat being carefully increased until the temperature has nearly reached that of the working-furnace. When the glass has been fused in the working-furnace and made into the form required, it is then ready for the third or annealing-furnace, as without this it would be too brittle for use; the slightest scratch or change of temperature would cause its collapse. The *modus operandi* of the glass or bottle blower may therefore be shortly summed up as follows: The melted glass, which has already been calcined in the fritting-furnace, is transferred on iron shovels to the working-furnace, where, under the action of great heat, it becomes fused and fit for being blown. A long, hollow, iron rod, about 5 feet in length, is taken and dipped into the pot; a sufficiency of melted glass is taken up, the workman blows into the other end of the tube, rolls it to and fro on a smooth slab, then slips it into a mould, still blowing through the rod, after which, by other deft operations, he forms the neck and rim of the bottle, and the bottle is then carried off on an iron rod to the annealing-furnace, from which, when cooled down, it emerges a perfect bottle.

The actual composition of the different forms of glass is:

1	2	3	4
Flint Glass	Plate Glass	Crown Glass	Green or Bottle Glass
Pure white sea-sand ... 52 Potash ... 14 Oxide of lead 34	Pure white sand ... 55 Soda ... 35 Nitro ... 8 Lime ... 2	Fine sand 63 Chalk ... 7 Soda ... 30	Sea sand ... 80 Salt ... 10 Lime ... 10
100	100	100	100

A discussion took place afterwards, and Mr. LINDSAY replied to various questions, and, after a vote of thanks had been given to the author of the paper, the proceedings terminated.

Society of Chemical Industry.

A MEETING of the Yorkshire Section was held at Bradford on Monday, Mr. J. E. Bedford in the chair. Mr. F. W. Richardson, F.I.C. (city analyst), and Mr. Adolf Jaffe, F.C.S., read a paper on "The Estimation of Sugars in Milk," and exhibited modern forms of polarimeters and tintometers. The authors strongly criticised ordinary text-book methods, and showed how complex and difficult a question it is accurately to determine several sugars when present in a mixture. Mr. Walter Gardner, F.C.S., of the Bradford Technical College, exhibited the Dalite lamp, of which he is one of the patentees, and the advantages of this light for colour-matching were illustrated. Mr. Gardner also showed improved absorption spectra apparatus.

Chemists' Assistants' Association.

A MEETING of the above Association was held at 73 Newman Street, W., on January 21—the President (Mr. A. B. Britton) in the chair. Mr. W. LAMOND HOWIE, F.C.S., gave a lantern-lecture, the subject being "From Mont Blanc to the Matterhorn." Mr. HOWIE graphically described the incidents of an ascent of Mont Blanc from the French side, and the descent into Italian territory on the other. Interesting spots in Northern Italy were then described, the views of Milan Cathedral being particularly fine. Striking northward again, Zermatt was reached, and the climb of the Matterhorn began. The closing scene—the Matterhorn by moonlight—places Mr. Howie in the front rank of photographers of mountain scenery, and was alone worth attend-

ing the lecture to see. There was a large attendance of members and visitors, and at the close of the lecture Mr. Howie received a very enthusiastic vote of thanks.

Bradford Chemists' Association.

A MEETING was held on January 23, at the Royal Hotel, Bradford. The President (Alderman Dunn) occupied the chair, and there was a good attendance. The special occasion of the meeting was a lecture by Mr. W. M. GARDNER, of the Bradford Technical College, on "Radium and the Genesis of the Elements," which was much appreciated. It was announced that the annual dinner of the Association is to be held on April 12, and that Alderman Robinson, of London, has accepted an invitation to be present.

School of Pharmacy Students' Association.

THERE was a full attendance of members at the first general meeting after the Christmas vacation, held at 17 Bloomsbury Square on Friday, January 22. Mr. T. E. WALLIS, B.Sc., read a highly instructive and interesting paper on "The Garden Spider," an excellent series of photomicrographs being shown. A short discussion took place, in which Miss HOOPER and Mr. F. G. C. WALKER took part. A vote of thanks was proposed by Mr. NAYLOR, seconded by Mr. WELTON, and carried.

Legal Reports.

High Court Cases.

THE ARSENICAL GLUCOSE ACTION.

THE hearing of the action of Bostock v. Nicholson was completed on Tuesday, and Mr. Justice Bruce reserved judgment.

BOVRIL (LIMITED) v. DUNCAN & DAGLISH.

IN the Chancery Division on Friday, January 22, before Mr. Justice Byrne, Mr. Waggett in this case moved on behalf of the plaintiffs for an injunction restraining the defendants, their servants and agents, from supplying, selling, or offering for sale as "bovril," or in response to orders for "bovril," any liquid preparation of meat which was not of the plaintiffs' manufacture, or in any manner representing or passing off any liquid preparation of meat not of the plaintiffs' manufacture as and for the goods of the plaintiffs. The learned counsel said that the defendants were restaurant-keepers at Newcastle. Mr. Melthold, who appeared for the defendants, said he was instructed to agree to an order. He understood it had been arranged there should be a perpetual injunction, with costs, and nothing else. Mr. Waggett said his learned friend's clients submitted to a perpetual injunction in the terms of the notice of motion, and agreed to pay the costs, the motion being treated as the trial. Mr. Justice Byrne agreed.

SCHWEPPE'S (LIMITED) v. CLAYTONS (CARDIFF) (LIMITED).

IN the Chancery Division on Saturday, January 23, before Mr. Justice Byrne, Mr. Sebastian, on behalf of the plaintiffs in this case, moved for judgment in default of appearance, which was merely a matter of arrangement because the defendants had written to his clients offering not to oppose the application in any way if they would waive an account of damages. This the plaintiffs had done. The action was brought by Schweppes (Limited) for an injunction to restrain the defendants from passing off any soda-water or other mineral or aerated water not of the plaintiffs' manufacture as Schweppes's soda-water, &c. The plaintiffs also asked for an order for delivery up or destruction of all labels in the defendants' possession or under their control, they not opposing the injunctions asked for. It was stated that the defendants were selling or offering mineral waters in embossed bottles with labels so closely resembling the plaintiffs' as to render it difficult to distinguish between them. Mr. Justice Byrne granted the injunction as asked, with a slight modification in form, damages not being asked for.

THE "ABSORBINE" TRADE MARK.

IN the Chancery Division on Friday, January 22, Mr. Justice Joyce resumed the hearing of the action of Thomas Christy & Co. and Mr. W. F. Young for an injunction to restrain Messrs. Tipper & Son, of the Veterinary Chemical-works, Birmingham, from using the word "Absorbine" in connection with an embrocation for horses. The defendants asked that the register of trade-marks might be rectified by the removal of the word as a trade-mark.

Mr. Younger, K.C., in the course of his reply for the defendants, said his Lordship must look at the state of things at the date of the registration of the trade-mark. The user of the word "Absorbine" by Messrs. Corbyn, Stacey & Co. prevented it being registered by the plaintiffs as an invented word. Of that user the Comptroller was entirely ignorant. Messrs. Corbyn, Stacey & Co. had circulated 480 copies of their catalogue in which they listed one of their preparations as "Absorbine." The only way in which the applicants had used the word was on a bottle of liquid embrocation, whereas the defendants put it on a pot of ointment. If judgment were given for the plaintiffs his Lordship would be stopping Messrs. Corbyn, Stacey & Co. from using a word they had adopted long before plaintiffs applied to register their mark. There had been no suggestion that what the defendants had done was calculated to deceive the public, and on the question of passing off the defendants' preparation as and for that of the plaintiffs there had not been even the foundation for a case laid before the Court. The point was a very substantial one on the question of costs, for many witnesses had been in attendance to prove that they had never heard of the plaintiffs' embrocation.

Mr. Hughes, K.C., on behalf of the plaintiffs, in summing up their case, contended that the user of "Absorbine" by the defendants was in respect of goods of precisely the same class as those of the plaintiffs, although they were made up in a different way. Anyone having "Absorbine" recommended to them as a veterinary specific would very likely accept ointment instead of liquid. If one man had as a trade-mark the word "Absorbine" for a veterinary preparation it would surely tend to deceive if another manufacturer used the same word to describe another article used for the same purpose, but made up by a different method. On the whole, he submitted plaintiffs were entitled to the relief claimed.

Mr. Justice Joyce said he would take time to consider his judgment.

Sale of Food and Drugs Acts.

GINGER-WINE STANDARD.

AT Longford Quarter Sessions the adjourned case was heard in which Mr. Charles Mulligan, a local trader, appealed from the decision of the local justices fining him 1*l.* for having sold ginger-wine which was not of the standard quality. The case was heard at the last Quarter Sessions, when the Judge expressed the opinion that the conviction could not be sustained as there was no standard for ginger-wine, but he adjourned the case for the production of expert evidence on the point if desirable. Mr. Delany, who appeared for the police, who were the prosecutors, said since the last hearing of the case he had received instructions from Dublin Castle to let the case drop as they were really bringing a case which the County Council should bring. His Honour said he regarded this state of things as not satisfactory, and regarded it as extraordinary that the County Council did not do its duty for the protection of the public. He gave 40*s.* costs against the complainant. Sergeant Finnegan asked would the result of this mean that he was not to interfere with wines in future. His Honour said he hoped the sergeant would do his duty, and the County Council should also do theirs.

County Court Cases.

A PILL VINDICATED.

AT Keighley County Court on January 25, the action Toothill v. Parkinson came before Judge Bompas, K.C., the plaintiff having claimed 25*l.* damages in respect of illness alleged to have been caused by pills supplied by the defendant. Analysis of the pills made for the plaintiff showed that they

had nothing to do with the illness, and accordingly judgment was entered for the defendant, by consent.

SYPHONS LENT.

At Lumbeth County Court last week Messrs Bennett & Co. claimed 2s. from a customer, being the value of a syphon lent. A messenger from the defendant's house had bought the full syphon, the contents only being paid for, as the syphon bore a label stating:

N.B.—This syphon is lent; if broken, or not returned within fourteen days, the sum of 2s. will be charged.

On being pressed to return the syphon, defendant said it was for a lodger, and he was not liable. Judge Emden gave judgment for the plaintiffs, with costs.

STEARIN-FREE COTTON-SEED OIL.

In the City of London Court, on Friday, before Judge Rentoul, K.C., an action was brought by William Joy & Sons (Limited), Sealecoates Oil Refinery, Hull, against Messrs. P. H. Palmer & Co., oil merchants, 9 Mincing Lane, E.C., to recover the sum of 18*l.* 10*s.* 4*d.* for oil supplied. A second action was brought by the same plaintiffs against the same defendants to recover 50*l.* as damages for breach of contract. Mr. Bray, plaintiffs' counsel, said the claim in the first case was for the balance of a large account for oil sold to defendants under a contract for thirty tons of J.K.L. cotton oil made on May 5, 1903. It was stipulated to be extra pale, edible, and stearin-free at 40° F. The place of delivery was f.o.b. Hull. The oil was to be supplied in three instalments,—10 tons in August, 10 tons in September, and the rest in October. The first two consignments were sent, and with regard to the August oil no complaint was made. The September oil was said to be not according to the quality contracted for. This he denied.

Mr. Joy, of the plaintiff firm, was called, and explained that stearin-free at 40° F. meant that the stearin should be invisible at that temperature. A sample of oil which he produced to the Court was quite bright, but if it were allowed to go to a lower temperature than 40° it congealed. If it once went below 40° it had to rise several degrees higher before it became clear again. He was the first to introduce stearin-free cotton seed oil commercially, and knew well what he was speaking about.

Mr. Banks (for defendants) produced two samples of oil received from plaintiffs. One was thick and the other very bright, and he mentioned that the oil must stand the temperature, remaining bright and not going cloudy as it had done, much to the defendants' annoyance and loss.

Judge Rentoul asked why the defendants had not ordered oil which was to be stearin-free whatever the temperature was?

Mr. Banks replied that if the oil had been stearin-free it would not have gone cloudy. He called Mr. Palmer, who said the oil was bought to remain clear down to a temperature of 40° F. It would not remain clear although the temperature did not go as low as 40°. That was why he was complaining.

Cross-examined: He said previous to the present contract there was one other. At the date of the present contract he did not know that the oil was to be sent to Marseilles. It was no doubt an important element that the oil should be free from stearin above 40° F. The buyers at Marseilles would certainly think it mattered very much. There was a great deal of competition between English and American oils in Marseilles.

Mr. Banks said the defendants had already complained that the 10 tons of oil sent them was full of stearin, whereas the sample sent was perfectly bright. Therefore, the sample did not represent the lot shipped. They had samples of the bulk taken by the tribunal at Marseilles. There could be no question about it.

Mr. Joy retorted that that observation was quite untrue. He had had samples of the bulk at Marseilles taken, and he found it to be a very beautiful oil. The reason they put the condition in their contract was so that the oil should not be submitted to a lower temperature than 40° F. The oil in dispute had been submitted to a lower temperature than 40°, hence its cloudy condition. The oil was according to contract, subject to the proviso by which they protected themselves against liability.

Judge Rentoul asked if the defendants could prove that the oil they now complained of had never been below 40° F.

Mr. Joy said that was the real point.

Mr. Banks thought they could.

Mr. Parrott, of the Produce Brokers' Association, said he had had a considerable experience in oils, and he corroborated Mr. Joy's statement in regard to the effect of the temperature on oils. If cloudy oil were stood in a room the temperature of which was 65° F. it would become clear in three days.

For the defence, Mr. Banks addressed the Court, and again called Mr. Palmer, who stated that for about twelve years he had been trading in oils in the Mediterranean. Competition was very keen indeed. In warm weather the temperature did not prejudicially affect the oil, but in the winter "the fun commenced." Directly the temperature fell the difficulty began. The sample bottle of oil did not appear to him to be the same as that shipped. The sample was sufficiently stearin-free to pass. When he supplied the bulk, and it turned out to be unsatisfactory, his customers made a claim on him. He produced samples of the oil objected to.

Mr. Bray objected, and as there was no witness from Marseilles, the Judge felt there was nothing to do but to adjourn the case for one to come.

Mr. Bray objected to an adjournment, and after some further talk this course was adopted, neither party liking it, and the Judge said the defendants must pay the costs of the day.

A BELLADONNA-PLASTER DISPUTE.

At the Clerkenwell County Court, on January 22, before Judge Edge, the case of Minchener v. Cohen was heard, being an action by Dr. Minchener, of Highbury New Park, to recover 3*l.* 3*s.* for medical attendance. The defendant, Mr. Morris Cohen, commission agent, counterclaimed for damages for negligent and improper treatment. Mr. Osborn, for the defendant, said that the claim was admitted subject to the counterclaim, and really the case rested on whether or no Dr. Minchener was negligent in supplying a pitch plaster instead of a belladonna plaster.

Mr. Donnelly (for the plaintiff): The doctor did not supply it, it was a chemist—a Mr. Benjamin Phillips—who is here.

His Honour: Was there a mistake?

Dr. Minchener: Certainly not, your honour. I ordered the treatment of a belladonna plaster, and went and purchased it, and have the chemist here who sold it.

Mr. Osborn: Would a belladonna plaster make the patient's skin blister?

Dr. Minchener: No, nor did Mrs. Cohen's skin blister. She was a nervous, excitable woman, and instead of soaking it off, tore it off, and so tore her skin.

His Honour: From what I understood of the case I must put a legal question to you, Mr. Osborn. Supposing a doctor prescribes—well, say, for argument, acetic acid, and the chemist puts up prussic acid, and the patient dies, who are you going to indite for manslaughter—the doctor or the chemist? (Laughter.)

Mr. Osborn: I suppose in that case it would be the chemist, but here it would be different, for the doctor fetched it himself.

His Honour: But if it was wrapped up, how could he tell it was a wrong article?

Mr. Osborn: I contend he would be the most to blame; besides, he admitted to several persons that he was very sorry, and that a sad mistake had occurred.

His Honour: What evidence have you of that?

Mr. Osborn: The defendant's wife and two persons who attended her, and who were told by the doctor it was a pitch plaster.

His Honour asked witnesses to be called.

Mr. Benjamin Phillips, chemist and druggist, said that he had the record of the sale of the belladonna plaster to Dr. Minchener, and it would be utterly impossible for him to have sold a pitch plaster, for he never stocked such an article.

Mr. Osborn: Would a belladonna plaster leave a black stain?

Mr. Phillips: I should not think so.

Mr. Osborn: What would you say it was if the skin blistered?

Mr. Phillips: An idiosyncrasy. (Laughter.)

Mr. Osborn: And if witnesses said that the skin was blistered for weeks, what would you say was the cause?

Mr. Phillips: Anything but the action of either a belladonna or a pitch plaster.

His Honour: What is the object of a belladonna plaster?
Mr. Phillips: It is very soothing to the nerves. It would be given for rheumatism.

His Honour: Pale people's skins will blister very easily, won't they?

Mr. Phillips: Yes, and of course the female skin is more sensitive than that of a man.

Dr. Hugh Woods gave formal evidence that a belladonna plaster was the proper treatment for Mrs. Cohen's condition, and denied that a belladonna plaster would leave a black stain, blister the skin, or "drive the patient mad."

His Honour: What evidence have you, Mr. Osborn, of negligence?

Mr. Osborn: Supplying a wrong article.

His Honour: He did not. If anyone did it would be the chemist.

Mr. Osborn: Shall I call my evidence?

His Honour: What earthly use would it be? Prove that belladonna was wrong treatment or else take your action against the chemist. We have it clear on the chemist's evidence it was a belladonna plaster. Are you going to waste the time of the Court calling a lot of women whose knowledge of belladonna plasters and their action is as limited as your or my knowledge?

Mr. Osborn: Of course, if your Honour is satisfied it was a belladonna plaster my case must fail.

His Honour: Am I to back the opinions of several women against the word of two doctors and the chemist?

Mr. Osborn: Dr. Woods does not say it was belladonna, for he was not there.

His Honour: No, but he says it was proper treatment, so where is the negligence?

Mr. Osborn persisted on calling both the defendant and his wife, and the latter said that directly she put on the plaster it "drove her off her head," and the agony was so great she took it off, and her arm was blistered for weeks. Those who were attending her said it was a pitch plaster and was the treatment for a horse, and Dr. Minchener admitted that a mistake had occurred.

Mr. Donnelly put some sharp cross-examination, suggesting that Mrs. Cohen started an action for damages against a butcher in whose shop her accident occurred, and when that action failed she made the attack on the doctor.

His Honour (to Mrs. Cohen): How do you know it was not a belladonna plaster?

Mrs. Cohen: Because I know. (Laughter.)

His Honour: Precisely the answer I expected. It is the usual woman's reason. Are your other witnesses as positive, Mr. Osborn?

Mr. Osborn: I submit the symptoms prove the mistake.

His Honour: I only discuss the symptoms with medical witnesses, not nurses and domestics or monthly helps. It is a most ridiculous counterclaim, and one that is utterly devoid of any support by evidence. Judgment for the plaintiff, with costs on the claim and counterclaim.

Dr. Minchener said that he would not press for Dr. Woods' costs, but seeing how Mr. Phillips had been drawn into the case, and the suggestions made, he asked that his costs be allowed.

His Honour: Oh, certainly. Mr. Phillips made no mistake, to my mind.

Mr. Donnelly thanked his Honour for the expression of opinion.

Bankruptcies and Failures.

Re FREDERICK E. JOHNSON, chemist and druggist, formerly a director of Allison, Johnson & Foster (Limited), manufacturing chemist, Hull.—At the Hull County Court on January 22, before Judge Raikes, K.C., an application was made for the discharge from bankruptcy of this debtor. After detailing the facts, Mr. Locking (for the debtor) remarked that if it was worth while going into the whole matter he could show his Honour that this was not an ordinary bankruptcy. Bankrupt's misfortune was brought about entirely by the liquidation of Allison, Johnson, and Foster, and as Mr. A. S. Maples (Official Receiver) did not object, he submitted the minimum suspension of the discharge for two years would meet the case. Judge Raikes remarked that the initial transactions seemed to be complicated. A man appeared to have been appointed liquidator of the company, and as such he had duties to perform. He sold a chemist's business to his step-

brother, and never got the money. It seemed a curious transaction. Mr. Locking agreed that it was complicated. Judge Raikes: Yes, it is rather more curious than complicated. Under the whole circumstances, the Judge granted the discharge with a two years' suspension.

Re CHARLES SAMUEL LEADBETTER, Great Ducie Street, Strange-ways, Manchester, Dentist.—At the Manchester County Court, on January 18, before Judge Parry, this debtor applied for his discharge. He had been adjudicated bankrupt in the spring of last year, and had borrowed money at heavy rates of interest. He dabbled in English and German patents, which had never been brought to fruition. He had tried to improve the Dentists Act by advocating that companies carry on dentistry, and had tried to float his own business for 15,000*l.*, but nobody took shares except himself and a few personal friends. He had also tried to amend the Patent laws. The company promoter who acted for him was a Mr. Wilkinson, of London, who committed suicide on the eve of a prosecution against him at Leeds. The debtor had also lost 20*l.* in a building society. His liabilities amounted to over 500*l.*, and a first and final dividend of 1*s.* 6*d.* in the pound had been paid. It also transpired that the debtor was an undischarged bankrupt. He had failed in October, 1870, with liabilities amounting to 681*l.* 17*s.* 1*d.*, and in respect of which no dividend had been paid. The Judge said the debtor's discharge could not be granted until he had received his discharge for his former bankruptcy in 1870, and adjourned the application until the first bankruptcy had been disposed of.

Re THOMAS JEFFREY VINCE, 11 Grosvenor Park Road, Chester, and lately of Devonshire House, Salisbury Road, Moseley, Birmingham.—Debtor is a commercial traveller in druggists' sundries and agent for the Trade Defence Association in Chester, Shropshire, and North Wales. The statement of affairs shows liabilities 815*l.* and assets *nil*. The cause of failure alleged by debtor is "loss sustained by forced sale by mortgagees of a house in Salisbury Road, Moseley." The Official Receiver, in his observations, states that the receiving order was made upon the debtor's own petition. In September, 1901, the bankrupt effected an arrangement with some of his creditors, but no deed of assignment appears to have been executed. The whole of his furniture was then sold, and a dividend of 5*s.* in the pound was paid to the assenting creditors. Most of the furniture was bought by the bankrupt's wife with moneys subscribed for the purpose by her and the bankrupt's friends. The bankrupt has a reversionary interest in a trust fund of 6,000*l.*, which represents voluntary contributions made on the death of his father in 1874, and the interest upon which is now received by bankrupt's mother. This reversionary interest is fully charged, according to the bankrupt's statement, and no benefit to the unsecured creditors is likely to accrue therefrom. Bankrupt admits that he has been aware of his insolvency for the last two years, during which time he has been sued by a large number of creditors, who recovered judgments against him. Forty-five unsecured creditors have been scheduled, and of these sixteen have claims amounting to 10*l.* and upwards.

New Companies & Company News.

SOLUROL (THYMIC ACID) COMPANY (LIMITED).—Capital 5,000*l.*, in 1*l.* shares. Objects: To adopt an agreement with Dr. E. Schmoll, and to carry on the business of dealers in drugs, chemicals, and patent medicines, and commodities which may be conveniently dealt in in connection therewith. The first subscribers are: F. Wissler, 9, The Paragon, Blackheath, S.E., gentleman; A. Pam, 21 Mincing Lane, E.C., merchant; E. L. Simon, 40 Mincing Lane, E.C., merchant; W. E. S. Wissler, 40 Mincing Lane, E.C., clerk; T. A. Platt, 85 Gracechurch Street, E.C., gentleman; A. A. Vale, 28 Queen Street, E.C., merchant; and R. B. Cooper, 47 Mark Lane, E.C. No initial public issue. The first directors are F. Wissler, F. H. Mertens, and A. Pam. Dr. E. Schmoll, The Marmite Food Extract Company (Limited), and Messrs. Leon and Charles Comar may each, while holding 200 shares, appoint a permanent director. Registered Office: 40 Mincing Lane, E.C.

SPRATT'S PATENT AMERICA (LIMITED).—The directors have declared an interim dividend for the six months November 30 last, at the rate of 5 per cent. per annum.

BOVRIL (LIMITED).—The directors recommend dividends on the preference and ordinary shares at the rate of 5½ per cent. and 7 per cent. per annum respectively, for the second half of the year 1903, and at the rate of 2½ per cent. per annum on the deferred shares for 1903, as against 2 per cent. for 1902. They have added to reserve 20,000*l.* as against 10,000*l.*, carrying forward 12,431*l.* as against 14,311*l.*

Our Town Traveller.

"THE BEST FOOD FOR INFANTS."

Quality has always been the characteristic feature of Bond Street merchandise, and an adherence to this principle for a century or so has doubtless contributed not a little to give Bond Street its pre-eminence the world over as a shopping street. It seems therefore particularly appropriate that "the best food for infants" should be manufactured there. These were the thoughts that passed in my mind when last week I called at Messrs. Savory & Moore (Limited), 143 New Bond Street, W., to get some particulars of the well-known infants' food associated with that company. The factory where the food is made is behind the pharmacy, but has separate approaches from Bruton Street. Under the guidance of Mr. A. L. Savory I saw the whole process of making the food from start to finish. The factory is in many respects a model one. A comparatively new building, especially designed for the purpose, and every part of it spotlessly clean—such is the home of Savory & Moore's food. The boilers are on the ground floor, and here, despite the temptation to dust and dirt, the spickness and spanness are akin to that usually found only in fire-stations and on a man-of-war. All the food-factory floors are scrubbed out weekly, and the paint and distemper are never allowed to show signs of age. The huge circular ovens for cooking the food are partly automatically controlled, but a sharp outlook has to be kept over the temperature, as this factor exerts a great influence on the digestibility of the finished product. Other floors are devoted to mixing, boxing, and wrapping, whilst in another part of the building I saw zarebas of filled cases from which orders are executed. Returning to the board room I heard from Mr. Savory and Mr. Ekin the story of the origin and progress of the food. It is over forty years ago since Mr. Savory's grandfather, acting on medical and chemical suggestions, began experiments which ended in the production of "the best food for infants." Mr. Savory was a medical man as well as a pharmacist, and it says much for the soundness of his work that the recipe from which the food is made to-day is substantially as he devised it. The machinery has, however, naturally been improved from time to time, to keep pace with the yearly increasing sales. It is interesting to note that personal recommendation has played a large part in promoting the sales of the food. Amongst royalty it was first used in the nurseries of our own Royal family, then in Germany, Russia, Spain, and France, and at the present time regular supplies are sent to the Queen of Italy. The choice of this food in circles where the best medical advice is available is in itself an emphatic testimony to its worth, and this is backed up by the numerous letters of praise which reach the proprietors daily. At the Health Exhibition in 1884 the only medalled food was S. & M.'s. The food, as chemists will have noted, is required to be mixed with fresh cow's milk—it does not contain any dried or preserved milk—thus re-enforcing the antiscorbutic element which natural food should possess. Another feature is the property the food has of mechanically breaking up milk-clots; it could be done by the addition of alkali, but the disadvantages of a chemical method are transparently obvious. "What now is the effect of protecting the price?" I asked, after we had exhausted the technical side of the subject. "Well, it has only been on the P.A.T.A. list for a few weeks, but we are quite satisfied with the results" was the reply. My suggestion that the good will of chemists is another valuable asset was heartily approved of, "although," added one of the directors, "we have always had expressions of good will from the pharmaceutical world." The new showcard which is being offered to chemists is a choice production, the photogravure centre being a charming child study by Mr. Spraight.

FORDHAM'S LATEST.

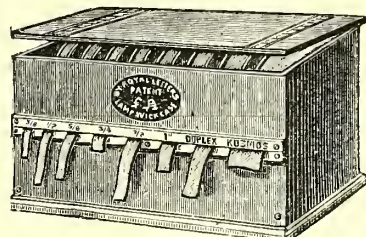
The novelties in the showroom of Messrs. W. B. Fordham & Sons (Limited), York Road, King's Cross, N., include several electrical appliances that many chemists find it profitable to handle. The "St. Pancras" electric pocket-lamp has now been reinforced by magic-lantern attachments

for use therewith. Each apparatus has six slides, containing a series of pictures. The price complete, ready for fixing to the pocket-lamp, is 18s. 6d. per dozen. A variation of the lamp is the "St. Pancras" electric torch, an illustration of which is given. The torch is pocket-size (about 6 inches by $\frac{3}{4}$ inch), the light is brilliant, and the price 40s. 6d. per dozen, subject. "Household" electric telephones and Fordham's electric-bell set may also be included in this category. The "Gourmet" shaving-mug is fitted with an indiarubber wiper for the razor, and a receptacle for the used lather, as well as the usual places for the soap and hot water. The mugs (1s. each) are made of white-glass china with gilt borderings. Speaking of shaving-mugs naturally suggests shaving-soap, and this Messrs. Fordham can now supply. They



have been appointed agents for "Shavo" shaving-cream. The illustration shows the "get-up." The pot is of white porcelain with a red celluloid cap, and retails in sixpenny or shilling sizes. A personal experience induces me to record my approval of "Shavo" as a shaving-medium. The lather is white, profuse, and easily obtained. Many chemists, especially in the provinces, sell cotton-wick. For their convenience the "St. Pancras" lamp-

cotton cabinet, shown herewith, was designed. It is on the pattern familiar to pharmacists in surgical - bandage cabinets. Glue and gelatine are articles of which Messrs. Fordham now hold large stocks. Scotch, English, French, Russian, Dutch, Italian, German, &c., glues of many qualities are kept, and there are always 200 tons of gelatins of various kinds in stock.



A WEST-END WHOLESALE.

The quaint old-world shop-front of Messrs. John Bell & Co., 225 Oxford Street, W., is of historic interest to pharmacists, but comparatively few are aware that behind that modest front is carried on one of the most up-to-date wholesale drug-businesses in London. The dispensing and retail departments of Bell's have been previously described in THE CHEMIST AND DRUGGIST, and my special mission one day last week was to find out how the wholesale is progressing. A passing greeting was given to the senior partner, Mr. Walter Hills, and then, under the guidance of Mr. E. W. Lucas, the partner who has charge of the wholesale department, I made a tour of the premises. Considerable expansion has taken place within comparatively recent times, until now the business occupies not only the Oxford Street site, but includes a row of houses in Hills' Place. The labyrinth of cellars, moreover, extends beneath other business premises in Oxford Street, and stretches right under the roadway of Hills' Place. There are all the usual sections of a wholesale business, but the arrangement of stock and departments has reached a pitch which lack of space usually forbids in similar circumstances. I cannot profess to describe minutely the several departments I went through. There was, for instance, the manufacturing laboratory—immortalised by Hunt and Macbeth—which is fitted up with the paraphernalia required in manufacturing modern galenicals. There are the familiar "wets" and "drys," and rooms devoted to special purposes. Here is a room given over to the manufacture of tooth-powder, and there the tablet, pill, and soap departments. In the analytical laboratory I noticed on the case of a balance an inscription recording the fact that it was given by Redwood to his friend Gale. It is substantially the same balance, but the scale-pans have been modernised. The presence of such pieces of apparatus as a

Schmidt & Haensch's polariscope and a high-speed centrifuge shows that modern methods are in vogue here. Water-analyses are constantly in progress, and Mr. Lucas had much to tell me of new hardness-tests which must in time entirely replace Clarke's test in busy laboratories. The storage arrangements are models of order. The alphabetical arrangement of stock obtains place wherever possible. Stopping at a cask of inf. gentianæ conc., Mr. Lucas drew off a jugful, as I questioned him as to the comparison between a freshly made infusion and one made from a concentrate. "This infusion, when diluted, will have the same sp. gr., the same extractive, and the same colour as the fresh infusion, whilst the difference in aroma can only be distinguished by an expert," was the sum of what I gathered from our conversation. Synthetic remedies make a brave show, although most of them would come within Brudenell Carter's definition of a quack medicine in that they have "titles which do not disclose their composition."

Qualified chemists are employed in the chief positions, and a checking system of poison-supply is rigidly observed. All galenicals supplied are the same as are employed in the dispensing business, than which, perhaps, no better recommendation can be given, and a point is made of the fact that in no case are two qualities of a galenical stocked. Besides tinctures and liquid extracts, special preparations of this house are conf. sennæ, pulv. glycyrrh. co. lin. potass. iodidi cum sapone, oxy. scillæ, cold-cream, and calamine. Those who write for Bell's price-list—and it is worth examining—should note the system of special quotations for specialties and galenicals.

The recent combination in

THE SPONGE-TRADE

made me curious as to the effect upon combiners and their customers. So I looked in at the headquarters of the Cresswell Brothers & Schmitz branch of International Sponge Importers (Limited), and interrogated Mr. Ernest Cresswell on the subject. Mr. Cresswell spoke freely, and with his usual courtesy put the reasons and results (so far as they have been attained) before me. I learned that the Turkish Government have prohibited the use of diving-apparatus in the sponge-fisheries of the Mediterranean. Their plea is—and it seems contrary to preconceived notions of the unspeakable Turk—that the practice must be stopped on humanitarian grounds. The loss of life resulting from diving-operations has, they say, been considerable, and therefore other methods must be resorted to. Now this prohibition, Mr. Cresswell explained, makes it much more difficult for importers to obtain the better class of toilet-sponges. In naked diving the diver sights his sponge from the surface, dives for it and brings it up, only remaining in the water for a few moments; whereas the sponge-diver, with his air-supplying apparatus, is able to walk about on the bottom for perhaps half an hour, select his sponges, remove them carefully, and ascend leisurely to the surface with his captures. Trawling naturally only brings to the surface the sponges that may happen to come the way of the trawler, and often leads to injury of the sponge itself. It was with the object of regulating the supply of sponges in face of these restrictions, and of keeping down prices, that International Sponge Importers (Limited) was projected. The objects of the company have been entirely successful. Every quality of sponge is as readily obtainable as heretofore on the London market (which, by the way, is by far the most important in the world), and prices, have remained at their normal figure. That the chemist has not had to buy dearer toilet-sponges is due to the fact, Mr. Cresswell contends, that the I. S. I. (Limited) was formed. The combination now includes four businesses, all worked separately, as distinct branches of the mother concern. The original combination as our readers doubtless remember, included Messrs. Cresswell Brothers & Schmitz, Henry Marks & Son (Limited), and I. & M. Cohen, but now Messrs. Firmin & Co., of 58 Mansell Street, Aldgate, E. (one of the oldest firms in the sponge-trade), have been acquired by the company. The branch arrangement is, according to Mr. Cresswell, working as smoothly as possible. A walk over Messrs. Cresswell's premises in Red Lion Square bears out the statement that there is no depletion of stock. Moreover, greater developments are anticipated, for Messrs. Cresswell are building new premises just behind their present warehouses in Red Lion

Square, which will give them another 9,000 square feet of warehouse space. A special illustrated price-list has just been issued by Messrs. Cresswell, in which are some interesting photographs, taken by Mr. A. G. Cresswell at the sponge-fisheries at Egina, Greece. The list also contains photographs of the premises at Red Lion Square, and gives a much better idea than words can convey of the enormous stock of sponges that is held. Prices of all kinds of sponges in all kinds of packages are given in the list. A new series of boxed sponges has just been put on the market. These contain, in attractive cardboard boxes, half a dozen or one dozen sponges of various values in each box. The boxes are suitable for display in pharmacies where space is limited.

Mr. Marks was not available when I called round at the registered office of International Sponge Importers (Limited), 42 Houndsditch, E. (the Henry Marks & Sons, Limited, branch of the concern), but his neighbour Mr. Laurie Cohen (I. & M. Cohen), at No. 53, intimated his entire satisfaction with the working of the combination. Not only has business increased, said Mr. Cohen, but all their customers have expressed themselves as entirely satisfied with an arrangement which is undoubtedly to their pecuniary benefit.

Association Ballads.

IV.—BLACKPOOL.

HERE rugged Lancastrians swallow the breezes
That blow with a zest o'er the wild Irish Sea;
On the Tower, in the Gardens, the gay tripper seizes
The pleasure that vanishes—ere it can flee.
It is there the sublime Liverpoolian gambols,
And "purrers" from Wigan disport themselves gay;
While "Jessie fra' Owdham" delightedly rambles,
All beaming content on her brief holiday.

It is here that the genial President Turver
Plies in the market place pharmacy's trade;
Toys at his leisure (like "lass an' 'er luvver")
With pharmacy's politics; works undismayed
Though Councillors wrangle in baneful disorder,
And Cutters their tentacles venomous spread;
Anon at the "Palatine" calls us to order,
And says, "Now the minutes had better be read."

For the swopping of sentiments monthly our meetings
Are found to be pleasant—removing old sores,
Fill our lives with the friendships that buffets and beatings
Tend hut to draw closer, thus fighting the Storks.
We talk of the puppets that ape to instruct us,
The All-wise who scarce know a pill from a pike;
But still who have "clemmed" us and hemmed us and plucked us,
Until we are bare as a newly-cropped "tyke."

Here are Laurie, and Johnson, and Boothroyd, and Greenwood,
And Mason, and Buckley, and Needham, and Sykes,
Discoursing on scenes when the wild Glinn has been rude
To Betters who cannot conceal their dislikes.
The Pharmacy Bill is discussed with enjoyment,
While Taylor descants on the P.A.T.A.;
But Sankey complains of no lack of employment,
Performing his part in unmurmuring way.

It is thus in good fellowship monthly we gather
From Blackpool, and Fleetwood, and Poulton-le Fylde,
And breezy St. Anne's—each one anxious to further
The cause of true pharmacy howsoever styled.
Here in the hub of Lancastrian revelry,
Cheerfully pounding pill-masses are we;
Fighting the fight with Lancastrian chivalry,
Strengthened and stirred by the sound of the sea.

CHURCH STRETTON MINERAL-WATER COMPANY.—In Chancery on Friday (January 22) Mr. Justice Byrne, on the motion of Mr. Farmer and others, debenture-holders, appointed Mr. James Vine, of Shrewsbury, chartered accountant, receiver and manager of this Company, with a view of selling the business as a going concern. The application was made by Mr. Wright. The Company were not represented by counsel, but the Secretary, who was present in Court, said they did not oppose the order. Mr. Mark Romer appeared for a firm of bankers at Shrewsbury who claim a charge and consented to the order without prejudice to the rights, if any, his clients might have.



Supplements to the Winter Issue

January 30, 1904



AN opportunity for inserting trade-circulars and lists in **THE CHEMIST AND DRUGGIST** only occurs twice a year, and those advertisers who appeal to the drug-trade in this way are well worth the support of our readers. We can truthfully say that no finer collection of insets has ever been placed before chemists than those given in this issue. Drugs, chemicals, machinery, soaps, sundries, and proprietary goods are all represented, and in such variety that it would be invidious to particularise. The thanks of the trade are due to the advertisers for the trouble and expense that have been incurred in thus bringing their goods to the chemist's office. The insets can be examined at leisure, and we are sure that no reader will regret spending his time in this quest for saleable articles. The following paragraphs summarise the chief features of each inset, but it is obvious that in the space at our disposal we cannot pretend that the notes touch more than the fringe of the subjects dealt with in the insets.

The next opportunity for inserting insets in the *C. & D.* will be in the Summer number, to be published on July 30. The Publisher is now booking applications for space, and our artists are already sharpening their pencils preparatory to submitting designs to applicants.

Allen & Hanburys (Limited),

Plough Court, Lombard Street, E.C., distribute with this issue a suggestive list of chemists' own specialities. The list contains illustrations of the different articles, so that a true idea can be obtained of the goods offered. Of the list itself we have nothing but praise; the printing and pictures are the best of the kind we have ever seen. The grouping of the different specialities is most artistic, whilst the coloured illustrations of the soap section mark the *Ultima Thule* of that class of work. (Inserted loose.)

The Anturic Salts (Limited),

12 Suffolk Street, Pall Mall, S.W., have something to say on "The Mystery of Gout." A booklet with that title is offered to chemists for distribution amongst customers interested in this problem. The anturic salts are used in the bath, and are stated to act by extracting the uric acid from the blood through the pores of the skin. Ailments allied to gout, such as rheumatism and chills, are also treated with anturic salts. (Pp. 152 and 153.)

John Bell & Co.,

225 Oxford Street, W., insert their January price-list to catch the eye of our colonial and foreign subscribers. The well-known etching by Macbeth appears on the outer cover, whilst the prices of spirituous preparations, being for export, are quoted duty free. (Colonial and foreign only.)

H. Bronnley & Co. (Limited),

31 and 35 Danbury Street, Islington, N., the well-known chemists' soapmakers, insert a tasteful circular in this issue. The inset gives a rosy view of the trade in private brands of soap, whilst the charming photographic illustrations convey a faithful idea of the chaste style in which the tooth-soaps are put up for chemists' sale. To meet competition there is nothing like

making a speciality of an article of everyday use like soap and this company give special facilities in that direction (Pp. 32 and 33)

Brunner, Mond & Co. (Limited),

Northwich, Cheshire, give particulars of the much-approved "Crescent" brand bicarbonate. For the manufacture of aerated waters this brand of bicarbonate of soda is exceptionally well fitted—its advantages are duly set forth in the inset. (Pp. 64 and 65.)

Cantrell & Cochrane,

Dublin and Belfast, give in a coloured inset particulars of their specialities in aerated waters. The ginger-ale is the leading beverage of its kind—it has been often imitated, but its flavour has never been surpassed. (Pp. 64 and 65.)

Arthur H. Cox & Co. (Limited),

Brighton, refer to their well-known pills and tablets in an attractive inset. The map of the world is given as an indication of the world-wide fame and distribution of these pellicular medicaments. The cold-cure and compressed dentifrice are two of the newer medicines produced by the company. When the history of tasteless medication becomes to be written, the name of Cox will figure largely in the treatise by reason of the fact that pearl-coated pills were first introduced from Brighton. (Pp. 152 and 153.)

Durafort & Son,

(E. Schmölle, agent), 42 Gutter Lane, E.C., illustrate the chief of the several kinds of syphons they make. The circular also gives a picture of a modern aerated-water machine specially adapted for filling syphons. (Pp. 64 and 65.)

Elliman, Sons & Co.

Slough, have a novel inset which takes the form of a reduced facsimile of the first section of the Elliman R. E. P. Book. Those of our readers who have not seen the book will get a fair idea of its scope and an indication that the work is worth sending for. The manner of obtaining the R. E. P. Book is set forth on one of the pages of the facsimile. (Pp. 32 and 33.)

Fursdon & Son,

Barnstaple, supply particulars of a useful veterinary medicine—Clement's cataline. The proprietors have great faith in their remedy, as is evidenced by the fact that the cost of the first bottle purchased will be refunded if the medicine does not give satisfaction. (Pp. 184 and 185.)

Wm. Gardner & Sons,

Gloucester, insert an abridged list of their patent rapid sifters and mixers. This inset requires careful reading, as the multiplicity of uses to which the apparatus can be put will come as a surprise to many who are using laborious and old-fashioned methods of mixing and sifting. (Pp. 184 and 185.)

C. J. Hewlett & Son,

35 to 42 Charlotte Street, E.C., give as an inset in the colonial and foreign copies of this issue a circular containing a special offer in regard to duty-free

galenicals. The outer page of the inset is a good example of plastic-work illustration, and a study of it will serve to pave the way to the good things recounted on the inner pages. (Colonial and foreign only.)

H. & T. Kirby & Co. (Limited),

14 Newman Street, W., call attention in their inset to the synthetic purgative, purgen. The pharmacological notes on the drug are given at great length, as well as the expressions of opinion of the medical profession. Purgen tablets are supplied in three strengths, for infants, adults, and extra strong, purgen being present in quantities of $\frac{3}{4}$ gr., $1\frac{1}{2}$ gr., and $7\frac{1}{2}$ gr. respectively. (Pp. 64 and 65.)

McKesson & Robbins,

New York (S. Maw, Son & Sons, 7-12 Aldersgate Street, E.C., London agents), again supply an inset of distinctive character. The McK. & R. ovoid capuled pills are goods to which attention is drawn, a point being made of the fact that the pills keep in any climate. The various salts of quinine in pilular form are a speciality of this firm. Examples of the combinations of quinine and other tonics are given on the outer page. (Pp. 152 and 153.)

James Pascall (Limited),

Blackfriars Road, S.E., who are known for high-class confectionery and chocolates, insert a booklet which is being used to advertise the "Golden Maltex." It is a modern tale of a "House that Jack built," the new version being quite as attractive as the older story. The booklet will doubtless prove as attractive to the children as the "Golden Maltex" has been for the last few years. (Pp. 64 and 65.)

A. & F. Pears (Limited),

71-75 New Oxford Street, W.C. insert a circular giving particulars of the world-famed Pears' soap. It is a handsomely printed inset in gold and colours, and many will be glad to see that this old-established firm retain their early connection with chemists and druggists. (Pp. 32 and 33.)

Robinson & Sons (Limited),

Wheat Bridge Mills, Chesterfield, insert a coloured supplement containing particulars of the chief lines in cotton-wool and lint they manufacture. The "Stag Brand" is well recognised in the trade as a standard quality of these fabrics. The cardboard-box department of the company has assumed colossal proportions, and a good idea of the variety of these handy containers is given by the illustrations on the inner pages of the inset. The "Mene" towels are advertised in an original manner on the last sheet. (Pp. 184 and 185.)

A. Sanderson & Co.,

Hull, call attention to an assortment of counter-adjuncts of the paint and varnish class. The handy manner in which these goods are put up makes them especially appeal to chemists, for whose trade neatness and quality are essentials. There is no reason why business in tinned paint should not be cultivated in a pharmacy, with such handy lines as straw-hat polish, boot-polish and furniture-cream. (Pp. 184 and 185.)

Savory & Moore (Limited),

143 New Bond Street, W., insert a sample of the booklet they wish to distribute through chemists. "The best food for infants" naturally receives first place in the inset; but the information on the development of infants is of great interest, as the particulars there given are not as a rule readily accessible to the public. The

facsimile of the new showcard inserted in the booklet will make our readers anxious to possess a copy of the larger work. (Pp. 32 and 33.)

Southall Brothers & Barclay (Limited),

Birmingham, devote their inset to an account of the evolution of the company. Founded some eighty years ago, it has been the aim of the proprietors to keep in advance of the times and prepare for the changes brought about by the decadence of conservative pharmacy. The illustrations enable the reader to follow the growth of the business from the small Bull Street shop of 1820 to the palatial premises recently completed in Priory and Dalton Streets. The pictorial history, however, does not include the Saltley and Bromsgrove factories, which are devoted to the manufacture of sanitary towels and surgical dressings. The advent of the counter speciality is an interesting section, but the practical value of the special offers on page 10 will probably appeal to a larger number of our readers. It should be noted, however, that in Group B of the special offers "1 dozen reputed half-pints A1 olive oil" should read "half a dozen reputed half-pints A1 olive oil." It is quite an original idea to enable prospective buyers to sample the different departments of a business, and one which we think will be appreciated. (Inserted loose.)

Stevenson & Howell (Limited),

95A Southwark Street, S.E., give a pleasing variety to the insets by printing their circular on paper of daring and original design. Raspberry fruitex is the special fruit flavour of the season. It is made solely from fruit, and adapted for preparing raspberrade and raspberry syrup and cordial. "Everything required by mineral-water makers" is the comprehensive inscription on this inset, and it sums up the position of the company completely. (Pp. 64 and 65.)

Chas. Tyler & England Brothers (Limited),

79 Copenhagen Street, Caledonian Road, N., give our many readers who are photographic chemists an opportunity of preparing for the opening of the photographic season. The inset gives particulars of the newest things in mounts, and a selection of the new season's models in hand and stand cameras. The "Teb" lamps are another line which should not be overlooked, whilst the claims of the "AnSCO" gaslight paper are well worth attention. (Pp. 32 and 33.)

Vinolia Company (Limited),

Malden Crescent, N.W., insert a ten-page circular, in which the leading lines of their large business are illustrated by means of trichromatic blocks. As the prices and discounts of the soaps are stated by the side of the pictures, a buyer is given the opportunity of judging what the articles are like, as though a traveller were placing the actual boxes before him. The high-class style of the Vinolia goods is shown to advantage, but it should be borne in mind that the inset only gives a selection of the company's various toilet-specialities. (Pp. 32 and 33.)

William R. Warner & Co.

(British Depôt, Francis Newbery & Sons, Charterhouse Square, E.C.), in a sixteen-page inset, deal in a practical way with the pill-question. We refer particularly to the page which deals with pill-nomenclature from the point of view of the Medicine-stamp Acts. A carefully compiled list of titles is given, the liable and non-labile titles being clearly indicated. The main part of the inset deals with Warner's elegant pharmaceutical preparations, and a point is made of the superior solubility of sugar-coated pills, which are one of the chief lines of this firm. Some

suggestive "own-name" articles for chemists' sale are indicated. (Inserted loose.)

Wright, Layman & Umney (Limited),

Southwark, S.E., have a very taking inset advertising Wright's coal-tar soap and liquor carbonis detergens, which is printed by Messrs. Nathaniel Lloyd & Co., London, S.E. The sale of the soap is advancing by leaps and bounds, and there is little doubt that the soap brings credit as well as profit to the chemist who sells it. The various coal-tar toilet-articles are pictured in an attractive manner in the eight pages of the circular, and note should be made of the terms upon which window-displays can be arranged. (Pp. 152 and 153.)

London Chamber of Commerce.

Chemical Trade Section.

A MEETING of this Section was held at the offices of the Chamber, Oxford Court, Cannon Street, E.C., on Tuesday afternoon, January 26, Mr. John C. Umney in the chair. Others present were Messrs. E. K. Bishop (Idris & Co., Limited), H. D. Bowden (Parke, Davis & Co.), Thomas Christy, E. Durrell, C. A. Gosnell, J. Groom (Nobel's Explosive Company), D. Lloyd Howard, F. Harwood Lescher, C. J. Fairfax Scott, and T. Tyrer. The minutes having been read and confirmed, Mr. John C. Umney and Mr. D. Lloyd Howard were unanimously re-elected Chairman and Deputy-Chairman respectively for the ensuing year. For convenience item 7 on the agenda, dealing with the

LONDON PORT AND DOCKS BILL,

was first considered, and attention was called to the circular giving the chief points of the Bill, which had been issued to members. The Chairman suggested the appointment of a special committee to watch their interests, and to take more active steps if necessary. It was eventually decided to leave the matter in abeyance at present, as the schedule of rates to be levied on goods and raw materials has little bearing on the drug-trade. The sense of the meeting was against the Bill in its present form, and the principle of imposing rates on goods and raw materials was characterised as bad, some of the suggested rates being out of all proportion to the first cost of the goods.

C.O.D. SYSTEM.

Mr. T. Christy, who has taken a prominent interest in this matter, alluded to the difference of opinion that exists and the difficulty his committee had in finding out what is the attitude of the drug-trade. It was the duty of his committee to collect and chronicle the information, but unfortunately a report had been adopted by the General Council of the Chamber approving of the C.O.D. system *en bloc*, without going into the pros and cons of the matter at all. Mr. Christy's P.O. Committee protested against this report going to the General Post Office because it was quite wrong—e.g., they actually passed a resolution that the C.O.D. system as adopted on the Continent should take effect here, and this includes the collecting of cheques, bills, and other banking business. When the committee saw that the General Council had passed so sweeping a resolution they thought it better to wait events, and they now expect to resume negotiations any day. Many of the wholesale houses had not replied on the question, which was to be regretted, as their opinions would be of much assistance in coming to a decision.

Mr. Lloyd Howard thought that if it were possible to send small parcels of goods abroad payable for cash on delivery, it would enable them to do a great deal more business in the way of exports. His firm frequently had letters from abroad for small parcels of their products, which, of course, were much too valuable to be sent as samples, and it would be a great convenience if the C.O.D. system applied in these instances.

Mr. F. Harwood Lescher said with regard to the inland

working of the system, it would rather tend to the encouragement of the small-order business from which they were all suffering. (Hear, hear.) The chairman also thought the advantages would be outweighed by the disadvantages, and eventually it was decided to leave the matter in the hands of the P.O. Committee to deal with, they collecting all the information possible.

Items 5, 6, 8 of the agenda dealing with customs entry forms and specifications, fiscal policy, and

DUTY-FREE ALCOHOL,

were then dealt with as a whole. Taking the last subject first, the Chairman said that at the last meeting of the joint committee of the Society of Chemical Industry and the committee appointed by the Chemical Trade Section held at the offices of the Institute of Chemistry on January 11, the matter was discussed in every aspect, both in connection with the present fiscal policy of the country and also in connection with the alterations in the Customs declarations of entries. As a result they practically came to the conclusion that although the British spirit-industry might to some extent be at a disadvantage at the present time, it would not eventually be so, provided their plant and machinery were adapted so as to produce potato spirit as well as, or in the place of, grain-spirit. At the present time it is practically impossible for them to produce potato-spirit. With a large demand for spirit for manufacturing purposes, the output of the distillers would be so increased that they would be able to work full time, which is not now the case. The committees felt that the best methods of working would be to get actual figures and see what articles are imported into this country upon which the Customs have power to levy duty, and which they have levied on ethyl chloride. It was suggested that a series of questions should also be sent to each member of the committee asking him to give particulars of the money-value of every 100 lbs. imported. Professor A. H. Green, one of the members of the committee, states that the ethyl alcohol used as a solvent in four or five of the principal aniline dyes imported into this country is equal to no less than 90,000% per annum, and the aggregate value may be placed at some 285,000£, upon which the Customs could have claimed duty. They had collected full particulars with regard to certain explosives, and Messrs. Evans Sons Lescher & Webb (Limited) had also given particulars regarding certain alkaloids. Information had also been collected with regard to phenacetin, sulphonal, &c. They hoped, therefore, to show the authorities under what disabilities British manufacturers work in the production of these articles.

The Chairman next called attention to the new requirements of the Customs with regard to the origin of imported goods, the ultimate destination of goods exported, and the origin and destination of re-exports (particulars of which were given in the *C. & D.* of January 2, page 31). In effect these regulations, he said, would mean that they would be called upon to declare where they obtained the enormous quantities of aniline dyes and numerous chemicals which they imported from abroad. In these circumstances the sooner they were enabled to work with duty-free alcohol and compete in these goods the better.

Mr. Lescher said his firm asked the Customs whether the declarations were required for goods in small bottles, such as bottled castor oil, cod-liver oil, &c., and they replied that there was no necessity to go into such detail. It was only when a barrel or so of such articles is sold that the actual destination is wanted.

The Chairman: Still, in the case of, say, ten cases pyrogallie acid, 1 cwt. phenacetin, 1 cwt. sulphonal, and 14 lb. or 28 lb. quantities of aniline dyes, we shall have to state the origin or country—whether it is Switzerland or Germany, and such statistics can easily be used against us by those countries.

Mr. Tyrer also condemned the proposals, and after further discussion it was decided to instruct the Council to watch the matter and record it on the minutes, the suggestion being made that the words "countries whence goods imported," as appearing in the new declaration, be substituted for "foreign or colonial." Mr. Christy proposed, and Mr. Lescher seconded, that the report of the special joint committee of the Section and the Society of Chemical Industry on the duty-free alcohol question be confirmed.

Festivities.

A Western Smoker.

A smoking-concert in connection with the Western Chemists' Association (of London) was held at the Norfolk Square Hotel, London Street, Paddington, W., on January 27, the President (Mr. J. W. Bowen) being in the chair. There was a good attendance, and excellent musical fare was provided, the artists including Messrs. Stanley B. Ince, Louis Breeze, W. B. Steele, and Frank Peskett. Professor Davenport, assisted by his American novelty, "The King of Instruments," gave several clever impersonations of well-known musical directors.

A Dance in Birmingham.

The annual ball of the Midland Pharmaceutical Association, one of the most pleasant functions of the year, was held on January 21, at the Vestry Hall, Islington Row, Birmingham. There was an attendance of about eighty members and friends, including Messrs. A. W. Gerrard (President), G. E. Perry, Chas. Thompson, A. Southall, Jas. Radford (to whose efforts as secretary much of the success of the gathering was due), J. Cuxon, J. Wakefield, F. Barlow, J. T. Gibson (Wolverhampton), and others. Mr. T. W. Lowther discharged with the utmost acceptance the duties of M.C., and music was supplied by Westwood's band.

Blackpool Chemists' Association.

The annual dinner was held at the Palatine Hotel, Blackpool, on January 20, at 8 p.m. Blackpool pharmacy was well represented, but the outlying districts did not respond to the invitation to any marked degree. Among the visitors were Mr. R. Lord Gifford (Blackburn), Messrs. John E. Parker and Nall, of Messrs. Evans Sons Lescher & Webb; Mr. Crossley, of Messrs. Oldfield, Pattison & Co. (Manchester), Mr. Brown and Mr. Arbuckle representing respectively Messrs. Blyton, Astley & Co. and Messrs. Kerfoot & Co. Mr. Jos. Sankey presided. After the loyal toasts had been disposed of, the Chairman called on Mr. H. M. Johnson, Ph.C., to propose the toast of "The Pharmaceutical Society." This was done, and Mr. R. Lord Gifford, in responding, referred to parliamentary matters, saying that chemists in approaching M.P.s have influence out of all proportion to their numbers. He spoke of the recent reorganisation of the British Medical Association, and the movement in the same direction by dentists, remarking that this was largely due to the same attack as that from which chemists suffer—apart from which bodies of persons called into existence in the public interest have a right to claim protection against others. The strength of the chemists' position lies in the fact that precisely the same principle affecting them, affects all other professions. Therefore they must help chemists to establish that principle. The qualified directorate is the Council's way of establishing a principle which is absolutely entitled to professional existence. The toast of "The Town and Trade of Blackpool" was given by Mr. F. Crossley, and Councillor Laurie replied in a humorous speech. "The Blackpool and Fylde Chemists' Association" was next toasted by Mr. John E. Parker, who said he remembered the district when there were only eight chemists in the whole of it, where now there are thirty or forty in Blackpool alone. Mr. C. H. Turver (the President of the Association and Divisional Secretary) responded. He said the past year had been much quieter than the previous rather strenuous one. Associations had done their work, and done it well; the Society had been strengthened, the P.A.T.A. had put money in their pockets, and these and others useful institutions had been strengthened, and even made possible by local associations. The toast of "The Visitors" was proposed by Mr. H. P. Withers, and responded to by Messrs. Nall and Saunders. The musical programme was the best yet put before the Association, amongst those contributing being Mr. Leslie Mayson, a local chemist, and Mr. Arbuckle, of Messrs. Kerfoot & Co., the former also performing the heavy duties of accompanist.

Nottingham Chemists Dine.

The members of the Nottingham and Notts Chemists' Association foregathered in strong force on January 21, at the Victoria Station Hotel, on the occasion of the thirty-fifth annual dinner. Mr. R. Fitzhugh, J.P. (President), occupied

the chair, and among the guests were the Mayor (Councillor A. Page, J.P.), the Sheriff (Councillor R. Fleeman), Mr. J. T. Spalding, J.P. and the Chief Constable (Mr. P. S. Clay). The members present included Messrs. S. Cook, F. R. Sergeant, C. A. Bolton, G. R. Parke, A. Middleton, T. Wilson, L. Thompson, W. Gill, A. Eberlin, H. Brown, J. T. Rayson, A. E. Beilby, R. H. Beverley, J. Bailey, W. Croft, J. Beachell, D. Ellis, R. Widdowson, J. Smith, T. Freeman, A. C. Vallance (Mansfield), H. Webb (London), Graves, L. Lawrence, A. E. Turton, J. A. Brown, T. L. Beverley, H. Prince, J. G. Wildgoose, Scattergood, Adamson, Shelley, F. Gibson, and W. Vincent. After the tables had been cleared, the evening was spent in toasting and harmony. First of all Mr. W. Gill submitted

THE PHARMACEUTICAL SOCIETY OF GREAT BRITAIN.

He said the Society during the past four or five years had risen in the esteem of chemists because of the fact that about the year 1839 or 1900 the management of the Society was put upon a more democratic basis. He spoke of the value of the Society as an educational body—as an institution for providing the country with a number of men qualified to compound medicines. The Society's examinations aimed to guarantee to the public that wherever poisons were sold they should be handled by men who were competent to deal with them. Wherever a man was calling himself a chemist and druggist, the Society aimed that the public should know that that man was competent to prepare medicines; but, unfortunately, that safeguard was not as complete as it might be owing to a flaw in the Pharmacy Act. They hoped that some day the defect would be remedied. (Hear, hear.) He concluded by referring to the carrying out of the provisions of the Pharmacy Act, and the good work of the Benevolent Fund. They had hoped to have had the company that night of Mr. Atkins, the President of the Society, but Mr. Atkins had not found it convenient to attend. Mr. Sergeant, in response, said the Society was founded in 1841 with a triple object—for the advancement of chemistry and pharmacy, and education of those who practised it; for the protection of the chemists and druggists of the United Kingdom; and for the foundation of a Benevolent Fund for those unsuccessful in business, and for their widows and orphans. He believed that there were 16,000 registered chemists in the country, of whom some 10,000 did not subscribe to the Benevolent Fund. There was not a chemist in business in the country who could not afford half-a-crown or five shillings a year subscription. (Hear, hear.) Mr. C. A. Bolton proposed "The Mayor, Magistrates, and Corporation of the City of Nottingham," the Mayor, Sheriff, Mr. J. T. Spalding, J.P., and Mr. S. Cook making acknowledgment.

THE TOAST OF THE EVENING.

The toast of "The Nottingham and Notts Chemists' Association" was eloquently introduced by Mr. G. J. R. Parkes, who said the Association was one of the most popular and energetic in the country. Their President was known universally throughout the trade as benevolent and kind-hearted, and as one who took great interest in young and old alike. They were also fortunate to possess excellent officers, Mr. Eberlin having been especially untiring in discharging his duties as Secretary. (Applause.) Mr. Eberlin, replying, said that the Association did not work in an ostentatious way, but it did useful work. During the year they lost the excellent services of Mr. Gascoigne, as Treasurer, but the office fell into the capable hands of Mr. Middleton. Mr. Eberlin threw out the suggestions that the medical men of the city might become associated with the Association as honorary members, and that chemists might serve on advisory committees to local charities. The healths of "The Visitors" and "The Chairman" were afterwards drunk. The music was admirably furnished by Mr. Twinn's string band, Miss Elsie Parkes, Mr. H. R. Clarke, Mr. A. C. Vallance, and Mr. H. Clarke.

ADVERTISEMENT from the "Times," Friday, January 27, 1804:

BROAD-STREET, AUSTIN FRIARS, &c. WANTED, in the neighbourhood of the above streets, a good FAMILY HOUSE. If the lower apartments are suitable as a counting-house, the more agreeable. Enclose particulars to L. H. V. at Messrs. Allen and Howard's, Plough-court, Lombard-street.

Now and Then.

ADMINISTRATION of the original Medicine-stamp Act, with due regard for the principle of taxation and for the correlative principle of exemption, was probably attended with difficulty, resulting in

The Amended Act of 1785.*

the altered provisions of which have a special interest in reference to the present situation. That Act is remarkable for the detailed specification of conditions involving chargeability, and of the converse conditions determining exemption from stamp-duty. Section 2 provides that stamp-duty shall be charged upon all drugs or medicines sold in Great Britain as remedies for the prevention, cure, or relief of disorders affecting the human body. The exemptions from that general charge are set forth in Sections 3 and 4—Section 3 providing that the charge of duty shall not extend to medicinal drugs, when sold entire, either by persons having specified craft-qualification for the sale of drugs and medicines, or by persons qualified by licence in pursuance of the Act; Section 4 providing that, under specified conditions, the charge of stamp-duty is not to apply to medicines sold by persons having the specified craft-qualification.

So far the enactment is practically identical with that of 1783; but the conditions specified in the amending portion of Section 4 qualify the exemption relating to the sale of medicines—first, by defining the kind of medicines intended to be exempt, as medicines that are “known, admitted, and approved of” as remedies—*i.e.*, the converse of unauthorised secret medicines. The exemption is further qualified by the statement that it does not apply to any medicine which is the subject of any one of three different forms of proprietorship; it is still further qualified by the statement that it shall not apply to any medicine “held out or recommended to the public” in a particular specified manner—*i.e.*, by the proprietor and as a proprietary remedy.

Those qualifying conditions did not affect the statutory position of chemists and druggists as persons possessing craft-qualification, by reason of which they were placed outside the operation of the original Act, in regard to exercise of their proper business. Their recommendation of accredited medicines, according to their known, admitted, and approved applications as remedies, could not therefore carry with it chargeability with stamp-duty, because in that case recommendation would not be an act of proprietorship: in would not indicate the existence of a condition under which the exemption provided by the Act did not apply.

Operation of the 1785 Act.

Manifestly the general policy of the amended Act was precisely the same as that of the original Act; the principles respectively regulating chargeability of medicines and exemption from stamp-duty were precisely the same as before, the incidence of stamp-duty, as well as of licence-duty, was also the same as in the original Act. These conclusions are directly contrary to the view put forward by Alpe (page 15)—*viz.*, that the Act of 1785 “effected important changes in the incidence of the duties” and in “the policy of the tax”; but they are supported by another statement on the same page, that the causes of liability and the exemptions from duty were “re-enacted with merely verbal alterations.” The reference at the same place to various modes of recommendation which, according to the provisions of the Act, would obviously be acts of proprietorship, furnishes a clue to the origin of the belief that recommendation of a medicine is the criterion of chargeability—the fallacy that has hitherto dominated the administration of the Medicine-stamp Acts, as will now be shown.

Section 16 of the 1785 Act provides that the stamp-duty imposed by that Act, in Section 2, shall extend to the articles mentioned in the schedule (all of which are manifestly proprietary medicines) and also to all medicinal preparations, of the like kind, in regard to which the persons making them

have or claim one or other of three specified forms of proprietorship, or if the medicines are held out or recommended to the public in a particular specified manner—*viz.*, by the proprietors thereof and as proprietary remedies. That provision does not qualify the charge of stamp duty enacted in Section 2; it is merely an amplified expository specification of the several conditions rendering medicines chargeable with stamp-duty when sold by any person whatsoever. Those conditions are respectively the exact converse of the conditions required for exemption from stamp-duty, consequently they are indicated positively in Section 16 of the Act and negatively in Section 4. Two distinct classes of medicines are thus made clearly apparent: proprietary medicines, unconditionally chargeable however sold; and other medicines, chargeable only when sold by persons without the specified craft-qualification securing exemption from stamp-duty.

The Acts of 1802 * and 1803 †

may be referred to together, since they substantially re-enacted the provisions of the previous Act, with additions having the objects of preventing evasion and of securing more effectual administration. Section 19 of the 1802 Act re-enacted the provisions of Section 16 of the 1785 Act, with a new schedule of taxable medicines, referred to in the same manner as the schedule annexed to the Act of 1785. By Section 21 all the provisions and powers of former Acts relating to medicine stamp-duties, are extended to the Act of 1802. The Act of 1803 † substituted a new schedule of proprietary medicines, and enacted that all provisions and powers of the 1802 Act relating to duties granted, or to any provisions of the 1802 Act, should be applied to the new schedule and to all provisions of the 1803 Act as fully as if the said powers, &c., had been severally re-enacted in the Act of 1803.

The next enactment relating to the sale of drugs and medicines was

The General Stamp Act of 1804, ‡

in which the stamp-duties on drugs and medicines and the licence duties on their sellers were included, with many other duties, in a catalogue consisting of two schedules, A and B, without any alteration of the general charge of duty, rates of duty, or exemptions previously enacted. This Act provided that, in respect of the things enumerated in the schedules, all powers, provisions, and penalties of former Acts should extend to them, respectively, as fully as if particularly repeated and re-enacted. Consequently the statute law relating to the sale of drugs and medicines, remained in precisely the same position that it was placed in by the Acts of 1802 and 1785.

The Act of 1812. §

Apparently the main object of this enactment was the correction of a mistake that had been made in Schedule A of the previous Act, in consequence of which doubt had arisen as to persons resident in Edinburgh being liable to the licence-duty imposed by the Act upon every proprietor of medicine and upon every vendor of drugs or medicines in Great Britain. However, the Act of 1812 repealed the schedule of 1804, substituting, in lieu thereof, a new schedule to be applied in the same manner as if it had been annexed to the Act of 1804. Section 2 amends the provision as to penalty for selling without stamp any medicine set forth in the schedule, and Section 1 provides that all the provisions, powers, and penalties imposed by the

* Title: “An Act to repeal an Act passed in the 25th year of the reign of his present Majesty for granting stamp duties on certain medicines and for charging other duties in lieu thereof, and for making effectual provision for the better collection of the said duties.”

† Title: “An Act to amend an Act passed in the 42nd year of the reign of his present Majesty, intitled [see *ante*, Act of 1802].—July 4th, 1803.”

‡ Title: “An Act to repeal the several duties upon stamped vellum, parchment and paper, in Great Britain, and to grant new and additional duties in lieu thereof.—28th July, 1804.”

§ Title: “An Act to amend an Act passed in 44th year of his Majesty’s reign, for granting stamp duties in Great Britain, so far as regards the duties granted on medicines and on licences for vending the same.—23th July, 1812.”

* The title was: “An Act for repealing an Act made in the 23rd year of the reign of his present Majesty, intitled [see *ante*, page 83, footnote], and for granting other duties in lieu thereof.”

Acts of 1802 and 1804, relating to the articles, matters, and things mentioned in the schedules annexed to those Acts, should be enforced as fully and in the same manner as if the new schedule had been annexed to the Act of 1804. In short, the Act of 1812 left the statute law relating to the sale of drugs and medicines practically in the same position as it was in 1802 and in 1785.

The supplementary portion of the 1812 schedule, charging stamp-duty upon all other medicinal preparations whatsoever, practically embodies the provisions of Section 16 of the 1785 Act as well as those of Section 19 in the 1802 Act. It applies, therefore, like those sections, only to medicines that are the subject of any one of three specified kinds of proprietorship, or to medicines that are recommended in a specified manner—i.e., by the proprietors thereof, and as proprietary remedies. That portion of the schedule is therefore not the general charge of duty on all medicines whatsoever: it is only a supplement to the general charge of duty as stated in the Acts of 1785 and 1802: it applies only to medicines that are unconditionally chargeable; but it does not supersede the general charge of duty, in the Acts of 1785 and 1802, by which all kinds of medicines were made chargeable when sold by persons who have not the specified craft qualification.

The schedule of 1812 also sets forth the exemptions to the general charge of stamp-duty in the Act of 1802, almost in the same terms as in Sections 3 and 4 of the 1785 Act and subsequent Acts, together with the specified necessary conditions already referred to; in fact, the exemptions in the schedule of the 1812 Act embody the provisions of Sections 3 and 4 of the 1785 Act.

How Misconception Arose.

The unquestionably meritorious object of Alpe's book requires, however, some more explicit exposition of the nature of his mistake than the mere statement made above, especially since Alpe is to be regarded as the exponent of opinions held by the Inland Revenue authorities. That is also necessary for understanding the view now put forward as to the objects and effect of the entire legislation. For that purpose material is afforded by Section 16 of the 1785 Act, which is represented by Alpe as being "almost identical with the general charge of duty in the schedule of the Act of 1812." In the first place there is not a general charge of stamp-duty in the schedule of 1812, inasmuch as the supplementary portion of that schedule relates only to proprietary medicines, and not at all to the other medicines that were made chargeable by Section 2 of the 1785 Act when sold by persons having no craft-qualification for that purpose and, by Section 4 of that Act, were also exempted from stamp-duty when sold by persons having the requisite craft-qualification.

Owing to the verbal similarity of the language used in Section 16 of the 1785 Act and that used in Section 4 of that Act, the "special exemptions" of the 1812 Act appear to have been mistaken for a general charge of duty on all medicines. Hence the conclusion that recommendation was the invariable criterion of chargeability, whereas recommendation carries with it chargeability only in the case of proprietary medicines, and then only because such recommendation is evidence of chargeability, because it is an act of proprietorship.

Importance of the Mistake.

If the supplementary portion of the 1812 schedule, or Section 16 of the 1785 Act, were to be taken as the general charge of stamp-duty, superseding the provisions of Sections 2, 3, and 4, the consequence would be as Alpe supposed—viz., that the Act of 1785 would have entirely changed the policy and effect of the previous Act. In that case its provisions would extend only to the taxation of medicines in regard to which the makers or vendors thereof had or claimed some exclusive proprietary interest; the legislation would not then have had any such beneficial tendency towards regulating the sale of drugs and medicines as the present writer has endeavoured to prove; on the contrary, it would have been merely a somewhat questionable device for raising revenue by giving countenance to a system which was denounced at the time as one "of treachery and imposture." Parliament would then have afforded some justification for the German doctor's opinion that England was "the paradise of quacks who turn disease to a com-

modity." But that such was not the case is manifest in the language of the Acts, as shown by the foregoing remarks. The whole tenour of the Acts is suggestive of a contrary spirit, and all their provisions—rightly interpreted—are eminently conducive to a rational regulation of the sale of drugs and medicines, of which there is at the present time great need.

Entanglement.

To ascertain precisely the circumstances under which chemists and druggists became contributory to the revenue, as Alpe supposed, in 1785, would probably involve more labour than the result would be worth; but the conjecture may be ventured that they were, in some instances, infected with proprietary-medicine distemper much in the same way that even eminent medical practitioners are known to have been at the period referred to. But supposing that to have been the case, liability under the Medicine-stamp Act would not have been incurred beyond the extent to which such a practice existed; even then it would not have affected the statutory position of chemists and druggists as persons exempted in regard to their legitimate practice and as specially qualified persons. In such cases there could not be any ground for objecting to the imposition of stamp and licence duties in respect to the sale of preparations in any way proprietary, because the provisions of the Acts relating to such medicines have always applied to chemists and druggists as much as they apply to any other persons. The more unaccountable circumstance is that the real objects and operation of the Medicine-stamp Acts should have been overlooked as they have been by chemists and druggists. That is the more remarkable since interference with the regular business of pharmacy induced chemists and druggists to coalesce with apothecaries for the purpose of protecting their common interest at a time when their relations were far from friendly.

The Present Situation.

From the foregoing reference to the several Acts it will be apparent that the principles acted upon originally have been consistently adhered to throughout. The powers of the Acts have been continued from time to time, so that their general effect is now the same as that of the 1785 Act, with continuous respect for craft-qualification. The effect of the judgment of the High Court in the case of *Farmer v. Glyn-Jones* also supports the view now expressed as to the objects and intention of the Legislature, while showing that the administration of the Acts as instruments of taxation has been based on misapprehension, or, at least, on insufficient appreciation of the converse bearing of the exemptions provided.

Under those circumstances alteration of the administrative action hitherto followed appears inevitable. Happily, the Pharmaceutical Society—charged with the public duty of regulating the qualification of registered chemists and druggists, and having in that capacity the guardianship of all legally qualified members of the body—is in conference with the administrators of the Medicine-stamp Acts on the subject, offering opportunity for mutual co-operation, in the light of the recent High Court decision. That may lead to such a general regulation of the sale of drugs and medicines as would be conducive to the public interest, advantageous to the revenue, and also secure a measure of justice to all legally qualified individuals engaged in the practice of pharmacy.

A CONTRIBUTOR to the "Lancet" of eighty years ago wrote as follows: "The art of the apothecary," we hear, is 'that of sending in medicine,' and 'the most wonderful mystery—what becomes of it all?' but this is far from his only art. There is the art of supplanting a pre-occupant, or rival—the art of worming into a family—the art of coaxing nurses—the art of frightening your patient, but, at the same time, keeping out his physician—the art, too, of calling him in *in time*; there is also the art of emulsifying a cough, and of cordializing a pious spinster, who would not drink a teaspoonful of 'Booth's best' to save her soul, but will swallow alcohol by the ounce from the doctor, to the decided detriment of her body; in short, there is the whole art of acting, looking, walking, talking, and riding, the apothecary—the mystery is soon solved; woe to the clergy were theirs as soluble; that is, palatable medicines are swallowed, nauseous ones smelt, and those of ambiguous character returned with the empty bottles."

Observations and Reflections.

BY XRAYSER.

John Taylor, of Bolton,

lived a short life, but a hard-working, useful, and honourable one. Suddenly stricken in the midst of his activities, he faced the sad decree with courage and resignation, almost with cheerfulness. A devoutly religious man, he was also broad-minded and charitable to everyone. He was a sound thinker, and when he spoke he did so with conviction and force. I knew him and esteemed him highly, and I believe that no one came into contact with him without being the better for his acquaintance.

It Would be Ungracious

to grudge the Court of Pharmacy an occasional relief from its more earthly labours in the shape of an excursion to the Empyrean of learning, or, failing that, a visit from such sympathetic professors as are willing to dream dreams of idealistic evolution on our behalf. And so long as no one is seduced into taking these symposia too seriously a pleasant intellectual recreation results, and no great harm is done. "University education for pharmacists" is a daring but a cheering vision of the future. Is it too socialistic to hope that one day everybody—pharmacist, bricklayer, 'bus-driver, even perhaps journalist—may have the chance of a year or two of university life in his youth? Not to prepare him for examinations—certainly not that—nor even with any specific view of fitting him for his after-work; but merely to give him a glimpse of the vast avenues of knowledge which are the heritage of all. But

University Education for Pharmacists

specially, in our present circumstances, and except for the gilded youth among us, would be a mere mockery. A doctor of science selling a pennyworth of sticking-plaster would be an incongruity which would compel a smile. Professor Wild says "the world of to-day has no use for half-trained men in any profession." That is just one of those showy bits of fallacious philosophy which look so sound but which fall to pieces as soon as they are tested. The world wants choppers as well as razors, rank-and-file as well as generals. It might be possible by skimming the cream off some forty chemists' businesses in a large city to nourish a gentleman qualified as Professor Wild would have him. That is about the present size of the opening for the being so reverentially materialised at Bloomsbury last week.

Professor Jackson's Scheme

for making the world more worthy of us is original, striking, and amazing. In his opinion we are not appreciated by the public as we deserve to be, and the Professor would remedy this indifference by the establishment of subsidised pharmacies in populous places where prescriptions might be taken and medicines supplied at cost-price. That the subsidised pharmacies would be appreciated need not be doubted, but it is not easy to see where the benefit to the rest of us would come in. The professors may be assured that pharmacists are grateful to them for their friendly interest, but certainly any attempt to realise this fancy of Professor Jackson's would wring from many of them an echo of Falstaff's complaint: "Call ye this backing of your friends? A plague on such backing."

One Important Issue,

which was almost ignored in the debate, was raised by Mr. Gadd's paper, which was a distinctly practical as well as a witty contribution. Mr. Gadd, with

experience to guide him, advocates a set course of scientific instruction requiring, according to his plan, ten hours a week attendance at classes during apprenticeship, and this would necessarily make the apprentice's shop-work a half-time occupation. That system appears to make the path to the qualification-gate as smooth and pleasant as it can well be. Professor Wild, on the other hand, thinks it better to leave class studies alone between the school examination and the college course, the interval to be employed in acquiring business training and manual dexterity. He does not consider—and his opinion on such a subject is weighty—that boys of sixteen are mentally fitted to study science. But then again Professor Greenish observes—and many of us could testify to the truth of his remark—that if the habit of study is abandoned at that period, it can only be recovered with difficulty. These varying views are certainly worthy of careful investigation.

Dispensing by Doctors

is regularly denounced at our dinners when the mutual though often concealed affection between the medical and the pharmaceutical branches of the healing art forces its way into expression. But I do not remember any previous protest against the practice so formal as a clause for a new Medical Act, which according to the "Lancet," is actually under discussion in an influential branch of the British Medical Association. The clause as drafted would render any registered medical man liable to a penalty of 100% if he dispensed or supplied drugs or other medicaments except in certain defined circumstances. There is no probability of the clause being adopted, but its proposal only is a portent. The comments in the "Lancet" show, and it was known before, that the greatest obstacle to the adoption of the idea by many practitioners is not so much counter-prescribing as the feeling that a large number of chemists are not to be trusted with the doctors' patients and prescriptions. It is feared, and it cannot be said to be entirely without reason, that there are chemists who would use their new opportunities disloyally. Cannot the better class of pharmacists take some steps which would neutralise that danger?

Our External Trade,

imports and exports, has been laboriously analysed by the "Economist" in a series of valuable tables, showing in regard to each section of the official figures whether the respective increases or decreases in value are due to a greater or less quantity of goods bought or sold by the nation, or to higher or lower prices. Thus, for example, it appears that in 1903 the United Kingdom imported about 14½ million pounds' worth more than in 1902, but 3,857,000% of this was caused by higher prices. These calculations are possible with approximate accuracy in regard to the leading staples of trade. For these the returns give both quantities and values. But I do not understand on what data the "Economist" bases its comparison in such lines as drugs. The drugs imported in 1903 were valued at 96,000% less than in 1902; no record of the quantities is available. But the "Economist" boldly debits half of this decrease to lower prices and the other half to reduced quantities. That can only be a guess, and in this instance I should say a rather bad guess.

These Millions

which we talk about so glibly in commerce, in finance, in science, and in all sorts of statistics, who realises what they mean? In his recent book, entitled "Man's Place in the Universe," Dr. Wallace opportunely recommends that some graphic attempt should be made in schools to impress upon scholars some idea of what a million really is. The walls of a hall 30 feet square and 25 feet high, he suggests, might be spotted over with little black circles, each ¼ inch in diameter and ¼ inch apart. A million of such spots would about cover those walls.

DISINFECTANTS.

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"The Right Tip."

SIR M. M. BHOWNAGGREE, M.P., K.C.I.E., furnishes the
title. Speaking to the penultimate toast at the first public
dinner of the London Chemists' Association on Tuesday
evening, he said, referring to the Pharmacy Bill, that Mr.

W. O'Malley, M.P., gave the chemists of Great Britain the right tip by telling them to organise, and by their influence as voters to get members of Parliament to give heed to the Bill. This may not pass the measure, but the righteousness of the cause will in the long run force the Government of the day to adopt it, and pass it as a measure remedial to the imperfection which was not observed in 1833. It was good advice given on the eve of the opening of Parliament, and after the chief parliamentary sponsor of the Bill had frankly, but diplomatically, spoken of the prospects of the measure and of his intention to stick to it as one which embodies a principle recognised in other departments of law. The London Chemists' Association have done excellent service to the whole trade by their timely and important function, and we trust the real significance of the event will not be lost sight of by chemists in all parts of Great Britain. Mr. Lord Gifford, speaking at Blackpool last week, did not exaggerate the power which chemists as exceptionally intelligent members of the community have upon their representatives in Parliament. We shall be none the better for this power unless it be used with determination and tact. It falls, we consider, to local associations to so influence their constituent members that all of them will press upon their Parliamentary representatives that legislation on the lines of the Pharmacy Bill is necessary for the country's welfare. Mr. Idris, in the course of the chief speech, gave a cogent exposition of the measure, and there is no reason why the impression which he made upon the eight members of Parliament should not through the action of all registered chemists be extended to the whole of the 670 members who constitute the House of Commons. It is a matter of regret that the Pharmaceutical Society was not officially represented at this dinner. The absence of the chief officers was remarked, but there is no explanation of the non-acceptance of the invitations, except it be that old-fashioned suspicion or jealousy which has served for sixty years to keep Bloomsbury out of touch with those who are not within a charmed circle, yet who are more frequently than the Society leaders in pharmaceutical reform.

Recent Researches on Cancer.

CANCER has engaged the public attention very much of late, and we appear to be on the eve of important developments in our knowledge of this dread disease. From a series of elaborate papers by Dr. Wolff, entitled "A Comparative Statistical Study of Cancer Mortality," in relation to the various countries of the world, the following conclusions have been arrived at, viz.: (1) That certain races are especially prone to cancer, particularly the Scandinavian and the different branches of the Germanic family. (2) That cancer is more prevalent in districts in which beer is the staple drink, and the excess is in some degree proportionate to the amount consumed per head. (3) That cancer tends to cause excessive mortality in regions abounding in water, but to a much more marked degree when these are covered with woods or forests. The mortality is also usually high along the valleys of rivers flowing from such districts. (4) That the regional distribution of cancer indicates the probability that the disease is due to a specific cause. With reference to Wolff's second conclusion, it is interesting to note that Dr. Newsholme, in a paper on "The Possible Association of the Consumption of Alcohol with excessive Mortality from Cancer," shows, in an analysis of the figures which he quotes, a death-rate from malignant disease of 132 per 1,000 among non-abstainers against one of 0.95 per 1,000 among abstainers. The idea that trees may play a part in the production of cancer is

not new, Noel having pointed out as long ago as 1897 that the inhabitants of isolated houses surrounded by trees are specially liable to suffer from this malady, and that the disease is particularly prevalent among forest guards. He suggested that cancer may be directly derived from a somewhat similar disease which occurs in trees, and which is known as "canker." Up to quite recently it might be said that the investigations on the nature of cancer had resulted only in theories more or less plausible, and its cause or causes have so far evaded detection. One of the views as to its nature, in favour of which many arguments have been advanced, is that it is the result of the invasion of the tissues by parasitic bodies. These, according to Plimmer, are small bodies from about 0.004 mm. to 0.04 mm. in diameter, and contain a very small more or less central body surrounded by a very delicate substance; and this, again, is surrounded by a capsule which often has a double contour. These bodies have very definite reactions to certain stains. They are found in practically all cancers in the growing active parts, and not at all in the degenerated parts, and they are not found anywhere else. These bodies have been classed with the Protozoa (Metchnikoff), with the Coccidia, and with the Gregarinidae. In support of the parasitic theory, cancer has been shown to have a distinct predilection for low-lying damp districts (well wooded and well watered), as well as having a special incidence in certain houses which have been called "cancer-houses." Plimmer, in upholding the parasitic theory, relates Behla's story of the town of Luckau with its 5,000 inhabitants, 3,000 being housed in the central part, and 1,000 in each of the two suburbs which flank it east and west. The population is agricultural, and during the years 1875-1898 remained the same in number; their habits and ways of life also remained unchanged. Between these years the deaths from cancer numbered 1 out of 25 to 30 for the entire town; 1 out of 9 for the eastern suburb; and in the western suburb there was not a single case. The houses were similar in size and arrangements, and were as a rule damp. The soil of the main town and eastern suburb was moist and lay low; that on the western suburb was, on the contrary, sandy, dry, and elevated. There was a large ditch which encircled the central town and the eastern suburb, not touching the western suburb, and the cancer followed closely the course of this ditch; the cases in the main town occurred chiefly in those houses whose gardens bordered on the ditch, and in the eastern suburb all the gardens were watered from the ditch. There were 127 houses in this quarter, and 56 of these were cancer-houses—43 with 1 case each, 10 with 2 cases, 2 with 3 cases, and 1 with 4 cases. The ditch contained foul, stagnant water, with which the people washed and watered their vegetables, many of which were eaten raw. Behla thought that the uncooked vegetables were the probable source of infection. Sanfelice found blastomycetes (yeast-like bodies) associated with the production of tumours, and these have been observed by several workers in cancers of various parts; but the exact relations of these yeast-like bodies are not yet quite clear, but are still under investigation. More recently Plasmidiophora Brassicae (belonging to the group of Mycetozoa) has been found in connection with a disease of certain plants called Kohlhernie, in which certain intracellular forms of this parasite show a remarkable resemblance to the cell-inclusions in cancer, and experiments with the spores of this organism upon animals by inoculation have been followed by new growths of considerable size with proliferation of infected cells, and these new cells were seen to be invaded by the parasite. Another theory widely held, and with much in its favour, is called "Cohnheim's Tumour Germ Theory." This theory is, says Mr. Morris, in his

Bradshaw Lecture before the Royal College of Surgeons on "Cancer and its Origin," "the one theory which is more consistent than any other with all that we know about malignant diseases, which fully explains the origin of very many non-malignant tumours," and is, he believes, destined to be accepted as the true explanation of the genesis of malignant new growths. This theory was first propounded by Darbott, and a year or two later by Cohnheim, who considered that carcinoma originated from embryonic cells, and that these cells which during foetal life are cut off from their proper connections remain in an undeveloped state, are surrounded by developing, and ultimately developed tissues, and thus become "embryonic inclusions," and that these cells remain quiescent until excited into activity at a later period of life. Senn enlarged upon Cohnheim's theory; and Mr. Morris, in a most convincing manner, proves the accuracy of the various points involved, and maintains that by attributing a local origin to cancer it encourages the hope of a definite cure if the disease is completely removed at a sufficiently early stage. Many views have been taken of the cause of cancer which make no pretence to explain its nature. Dr. Alexander Katz, of Hamburg, in a paper read before the Berlin Cancer Committee in January, 1902, grouped the alleged causes of cancer-formation into the "intrinsic and extrinsic." The intrinsic embrace amongst others the causes alleged under Thiersch's and Cohnheim's theories. According to Thiersch the beginning of a tumour-formation is due to a loss of balance between the epithelial cells and the connective tissue, and in carcinoma this loss of balance occurs during advancing age by the degeneration of the connective tissues, and results in an invasion of these tissues by the epithelial cells. Katz says that this view is only of value in that by means of it the age-limit can be explained. Of the intrinsic conjectural causes there are two sets (1) the various forms of injury, chronic irritation, and chronic inflammation, &c., (2) micro-organisms. Virchow laid considerable stress on chronic irritation as a causative factor, and Mr. Morris suggests the importance for us all to bear in mind the pernicious rôle played by the clay pipe and the carious tooth in provoking the development of cancer. Several of the views put forward, says Mr. Morris, are mutually exclusive of each other. Thus, while some persons attribute to arsenic, some to sugar and confectionery, and some to salted meats the increase of cancer mortality, others regard arsenic as a curative agent, and molasses as a sure remedy, and others, again, consider common salt and the chlorine given off from it as the means of killing the saccharomycete to which malignant disease is in their opinion due, excess of water and deficiency of common salt in the tissues being in their view the alpha and omega of cancer causation. At last, however, we seem to be stepping from the quicksands of conjecture on to the solid ground of established fact. In a paper just read before the Royal Society, under the joint authorship of Professor Farmer, Mr. Moore, and Mr. Walker, on "Resemblances Exhibited between the Cells of Malignant Growths in Man and those of Normal Reproductive Tissue," the true nature of cancer-cells is demonstrated. It is clearly shown that cancer-cells are reproduced after the manner in which "reproductive" cells are formed, in contrast to the formation of ordinary cells, and likewise of benignant tumour-cells. These reproductive or germinal cells have each got a central spot or nucleus which contain a network of microscopically fine threads. When the cell is about to divide, the fine threads of the nucleus join to form one thread, and then split up into a number of smaller segments. These segments are called "chromosomes," but instead of being V-shaped and of equal number on either side of the central line as they are in the

ordinary cells and in those of benignant tumours, the chromosomes consist of loops, beads, and circles, and number only half as many as are found in ordinary cells, and are differently arranged. Drs. Bashford and Murray corroborate the above, and have demonstrated that although the transmission of malignant new growths has never been effected from man to animals, nor from one animal to another of a different species, yet by the successful experimental transmission of cancer from one animal to another of the same species it has been found that the tumours which develop are direct genealogical descendants of the cells introduced. The process thus is in no sense an infection, for the tissues of the new host are merely the soil in which the transplanted tissue grows, and do not themselves become cancerous. These discoveries have important bearings. It is obvious that we have here a new and valuable method of diagnosing malignant from non-malignant growths—a method which may enable and give to the surgeon a better chance of eradicating the disease in its earliest stages. We seem now to be well on the way to a knowledge of the true nature of cancer; and although we do not yet know its cause, nor find in these discoveries any new indications for its treatment, we may hope in the near future to have light thrown on these points by the further labours of the able men engaged on the task.

Dispensing Problems.

ON a previous page "Xrayser" calls attention to a disclosure which has been made respecting a proposal of the British Medical Association to discourage dispensing by medical practitioners. We are not disposed to attach much weight to what a branch of the Association says on this question, but we know that it implies a wide of the mark anticipation of a scheme which during the past year was considered by one of the Central Committees of the Association. That scheme did not, however, contemplate such violent upheaval of traditional methods that an Act of Parliament would be necessary to enforce them. It rather contemplated co-operation between medical and pharmaceutical authorities, with the view to the suppression of counter-prescribing by chemists in return for a widespread stoppage of dispensing by doctors. Necessarily such a proposal attacks principles of right on both sides which are worth fighting for, and we have a timely example of what chemists would have to say in the remarks made by Mr. J. P. Gilmour at Glasgow last week, reported on page 150. He asserted his right (not touched by the Medical Acts nor by the Apothecaries Act, which does not extend to Scotland) to prescribe when in his judgment he may do so with advantage to his customer and profit to himself. On the medical side it is said medical men are not disqualified to dispense medicines, and by training they are competent to do so. Further, that the giving of prescriptions to patients would lead to repetition of the medicines without re-consultation with the prescriber, and therefore would diminish the latter's income, while an additional burden would be placed upon the lower classes, who would have to pay the chemist as well as the doctor. Other reasons against departure from the English custom are advanced, the weightiest of all being that English householders are not satisfied with, and some will not pay for, medical advice unless they get a bottle of medicine along with it. This, of course, is pure sentiment, and in consequence the hardest possible thing to reform. We acknowledge its common existence, and know many general practitioners who have battled against it with such success that they have well nigh reached the workhouse. Can it be overcome without recourse to legislation, for which the professions and the

community are not ripe? We have hopes that it may, because in some English towns, and in practically the whole of Scotland, medical practitioners, with a few exceptions, regard dispensing of medicines as no more a part of their duty than nursing their patients. They write prescriptions, chemists dispense them, and the public, from the humblest artisan to the richest merchant, recognise that the doctor is worthy of his hire: they feel that his professional experience alone is worth paying for apart from the supplying of medicine. The dispensing charges are met with equal recognition, but in many cases they are on the low scale—e.g., 1s. to 1s. 4d. for an 8-oz. mixture, tablespoonful dose. The system works out well in practice. In Scotland it began in the fifties of last century, or just about the time when medical apprenticeship was on the wane, and one of the most notable results of it is that, although even visiting of the sick by chemists is perfectly legal, it is rare. One seldom hears a medical man in Scotland complain about chemists prescribing, although that is common enough; but it is just as common to hear a chemist tell a customer, "You had better go and see Dr. So-and-So."

If such conditions are possible in Scotland, where the qualifications of prescribers and dispensers are the same as in England (except that in Scotland the only recognised qualification for dispensers is that of the 1868 Pharmacy Act), there are good grounds for predicting that, by mutual forbearance, there should come about that devolution of dispensing from medical practice to which we referred last week. It is on these lines, we understand, that the leaders of the British Medical Association desire to work with the Pharmaceutical Society.

One aspect of the matter has to be considered—namely, the repetition of prescriptions for potent drugs, especially narcotics. Dr. Outterson Wood, of Margaret Street, Cavendish Square, wrote to our medical contemporaries last week about a prescription for $\frac{1}{2}$ oz. of cocaine solution given to a patient by a high authority, and which in a short time had been dispensed by many different firms of chemists, so that the patient had obtained in the aggregate 1 630 gr. of cocaine hydrochloride. Dr. Wood very properly points out the calamitous results which follow such uncontrolled dosing, and says:—

The remedy which suggests itself to me, and which possibly might be adopted, not only in connection with the prescribing of lethal doses of dangerous drugs, but also with regard to many prescriptions for disorders requiring but a short course of treatment, is one which I am assured by a highly respectable firm of pharmaceutical chemists they would gladly welcome. It is that in all cases where medical men prescribe such drugs as morphine, opium, cocaine, &c., which are known to induce a habit, the words "not to be repeated" should be written across the prescription, which should be signed by the prescriber in full, and not merely initialled. By this means the prescriber would be able to control the quantity of the drug taken or used, and prescriptions would not be handed about from one person to another *ad libitum*, especially if the words "not transferable" were added.

This subject has also been dealt with by the "Dundee Evening Telegraph." It is a grave one, cocaine being one of the most horrible outcomes of it, and it has ruined some of the brightest intellects of the world. We feel sure that chemists as a body will co-operate in any measure, legislative or otherwise, to control the distribution of these purely palliative narcotic drugs, which ought really to be used by physicians themselves. Some who appreciate what the drug is capable of doing to their patients never entrust them with it. We commend this course to physicians, and we may point out that our pharmaceutical authorities, through the example of the Privy Council, have very considerable powers in respect to the scheduling of such articles as cocaine. If it is legal to place carbolic acid on the

schedule conditionally, it should be legal to so deal with cocaine that a physician's prescription would be necessary for each sale. We do not recommend that course, but mention it as an example. Meanwhile we again call attention to the fact that cocaine and preparations containing it in demonstrable quantity are in the first part of the Poisons Schedule, and should only be sold to persons known to the seller under the conditions prescribed by law.

Stamped-medicine Legislation.

It will be remembered that when reporting on the conference which took place immediately before Christmas between representatives of the Pharmaceutical Society and the Board of Inland Revenue, we mentioned that some alteration of the exemption as to known, admitted, and approved remedies is contemplated. Amongst the interests which have been directed to influence the Board in this matter, not the least weighty have come from limited companies, including the Civil Service Supply Association and the Army and Navy Stores. There is no question that the Somerset House authorities are not unfavourable to the view that such corporations are handicapped by the Divisional Court's interpretation of Exemption 3, and would extend the exemption to them, as well as to registered chemists if they could. They are, however, debarred from this by the judgment in *Smith v. Mason*, wherein one of the defences was that one of the articles sold was an entire drug, therefore exempt from duty. It was held that it was not, and the Judges at the same time ruled that, although it had been an entire drug, the defendants as a limited company did not come within the exemption as to chemists, who must be persons who have served a regular apprenticeship. Although this was a side issue, it is an incontrovertible fact. The Board cannot proceed in the Exemption 3 matter without the sanction of Parliament. We learn this week that a short departmental Bill is in preparation, which it is hoped to rush through Parliament. It is stated that this measure will revise the incidence of the stamp-duty, modify the rates of duty materially, and provide for a new stamp. Our inquiries at Somerset House do not enable us to corroborate these statements in their entirety, but we consider that the trade should be ready for legislation on this subject. In view of this contingency we have during the present month published three of a series of articles under "Now and Then," which are intended by the writer to show registered chemists the special recognition of their qualification when Parliament has dealt with the sale of stamped medicines. The recognition is indisputable, and it is only obtainable by the statutory qualification of apprenticeship now merged into registration under the Pharmacy Act. This is now seriously threatened, and we ask the representatives of chemists to lose no time in posting themselves well by reading these articles, and preparing to fight for their historic rights.

A PROPRIETARY BOYCOTT.—Considerable excitement has prevailed in Canadian drug-trade circles during this month in consequence of an alleged attempt to boycott one of the proprietary-medicine manufacturers by the wholesale houses, and the matter has been actively taken up by the Manufacturers' Association, the retailers, and the wholesalers. A good deal is being said on both sides as to the action of the wholesale houses in endeavouring to get a working margin of profit for handling proprietary goods. It is admitted on all sides that the cost of handling these articles in Canada is very much higher than in America or Great Britain, in consequence of the widely scattered population and the greater cost of doing business in the Dominion. The matter is to be discussed at a joint meeting of representatives of wholesale, manufacturing, and retail interests at Toronto at an early date.

Notes and Novelties.

"The Business Motor."

THE January number of this publication by Messrs. Newball & Mason, of Nottingham, begins with remarks on "January, the resolution month," the most pertinent chapter to which is one on launching a proprietary article.

Clinical Thermometer Price-List.

MR. G. H. ZEAL, 82 Tarnmill Street, E.C., has just published a new illustrated price list of clinical thermometers made by him, including the unique "Repello." Any of our subscribers may obtain a copy of it post-free on application to him.

P.A.T.A.

THE ADDITIONS to the list of protected articles on the P.A.T.A. this month are Chapman's entire wheat-food, Hansen's dairy preparations, Newbery's (Reading) cup shaving-brushes, shaving-cream, &c., petol suppositories "Velvetta" toilet-paper, and "Zanol."

A Souvenir.

MESSRS. JOHN MORGAN RICHARDS & SONS (LIMITED), 46 Holborn Viaduct, London, E.C., have recently published an artistic portfolio containing reproductions of photographs of their premises, both exterior and interior, with pictures of those who work therein, and indications of the business they do. The souvenir is beautifully produced.

"Profit."

THIS is the name of a monthly published by the Spatula Publishing Company, Sudbury Buildings, Boston, Mass., U.S.A. It is devoted solely to retail advertising, and it is got up with that definiteness of purpose and brightness which characterise these Boston publications. Any subscriber to THE CHEMIST AND DRUGGIST will get a sample copy free by writing to the above address.

The Warwick-Brookes Lamp.

IN addition to the ideal portrait-lamp recently referred to in this journal, Messrs. Geo. Houghton & Son (Limited), 88 and 89 High Holborn, W.C., call our attention to the Warwick-Brookes electro-flash lamp. This lamp is especially constructed for photographing large groups, interiors, and theatrical scenes, and gives a very powerful light. A flash-powder is used and fired by an electric-current. The apparatus costs 3*l.* 15*s.*

"Private Brands."

SINCE Messrs. H. Bronnley & Co. (Limited) introduced private brands of soaps, tooth-tablets, &c., they have originated many distinct styles of containers. These are now being closely imitated as to externals, but the imitators have not hit the fine qualities of Messrs. Bronnley's preparations. It is interesting to note that Messrs. Bronnley are now placing on the market a second series of articles, the prices of which beat the competitive rates.

"Korkit."

LEST any may suppose from an article in this issue that the new kind of corks treated by the process patented by Messrs. Helbing, Passmore and Wetherman are to be made and sold by these gentlemen, we would mention that the patent rights are held by the International Korkit Syndicate (Limited), 63 Queen Victoria Street, London, E.C. The Company's object is to instruct users of corks how to carry out the process, and to give them the necessary license for so doing.

Luce's Eau de Cologne.

LUCE'S Eau de Cologne Company, Southampton, Jersey, and 12 Little Britain, London, E.C., have recently distributed to likely purchasers of Eau de Cologne a neat pamphlet about their product, in which are given some pretty views of Southampton and Jersey, besides pictures of the Southampton and London depôts and particulars of Luce's articles. Their object is to influence business, and any chemist who would like to see a copy of the attractive pamphlet should write to either of the depôts.

"Tabloid" Effervescent Tri-Bromides.

MESSRS. BURROUGHS WELLCOME & CO. have introduced in tubes of twenty-five a preparation consisting of potassium and sodium bromides of each 0.4 gram and ammonium bromide 0.2 gram along with an effervescent basis. The combination of the three bromides is regarded by many physicians as better than any one of them alone, and this form of exhibiting the combination is good, because when one or two of the tabloids are crushed and dissolved in a sufficiency of water a pleasant-tasting saline draught is obtained.

St. Louis Exhibition Exhibits.

WE understand that the representation of British chemistry and pharmacy at this year's great exhibition will be good. Amongst those participating on the pharmaceutical side, other than firms already mentioned, will be Messrs. Burroughs Wellcome & Co. and Mr. William Martindale. The former exhibit individually and the latter joins in the collective exhibit, and Dr. Martindale has made an effective show of his firm's special pharmaceuticals. The chemical exhibits will include splendid displays by Messrs. Brunner, Mond & Co. (Limited), Howards & Sons (Limited), T. Tyrer & Co. (Limited), and the United Alkali Company (Limited).

Lasin.

MR. F. G. PHILLIPS, successor to Mr. W. Stanbury, 12 Charterhouse Street, Holborn Circus, E.C., introduced into the British market some time ago the Lasin pencils, which, when rubbed on spectacles or goggles and polished with a handkerchief, prevents that condensation of moisture on the cold glass which is so annoying to people who have to wear spectacles. Mr. Phillips has now introduced a more convenient form of the article—namely, a pocket-book containing a bundle of small pieces of soft gauze saturated with Lasin. One has only to rub one's glasses with this gauze in order to get a nice polish on the glass and a non-condensing surface. It should be a very saleable line at 1*s.*

Dose Dial.

THE illustration shows a novelty in the way of dose-indicators which is being introduced to the trade by Mr. H. B. Wyllie, Grassmarket, Edinburgh.

The indicator serves a treble purpose to the medicine taking community—it indicates the time and quantity of the next dose, keeps the spoon at hand for measuring the dose, and in the interval acts as a cover for the medicine-glass. The indicator is made of opal-glass, the disc being 3½ inches

across. As will be seen from the engraving, parts of the surface are roughened, to enable certain particulars to be entered on the disc. The clip shown on the edge points to the figure indicating the time for the next dose, and acts as



a holder for the spoon. It is an idea which should be useful particularly in public institutions, where a system that tends to prevent medicine mistakes is always welcome. The dials are boxed and sell at 1s.

Spongio Piline.

MESSRS R R WHITEHEAD & BROTHERS (Limited), 10 Endell Street, W.C., the inventors and patentees of the well-known Spongio Piline, have lately introduced a new material, called Impermeable Piline, which promises to fulfil for antiseptic and narcotic applications what the older piline has done for fomentations. Impermeable Piline is composed exclusively of fine lamb's-wool felt, about a third the thickness of Spongio Piline, and, instead of indiarubber backing, it is coated with an antiseptic waterproof material, which is not affected either by hot water or strong spirit. This new piline is well suited for applying liniments in cases of gout and rheumatism, when it is desired to have a lasting application and greater warmth and comfort than is secured with lint and gutta-percha tissue. There has recently come on the market from Germany a so-called Spongio Piline, which at a distance looks somewhat similar to Messrs. Whitehead's original article, but if examined it will be found to be made of sponge and coarse wool. It lacks the smoothness and softness of the original Piline, and we have noted that the black backing contains a good proportion of bone-black (or something of that nature); further, that after it is heated the waterproofing remains soft and sticky. These undesirable characteristics are not found in the pure indiarubber backing used by Messrs. Whitehead for their Spongio Piline.

Vinode.

THIS is the name which Mr. Vincent Wood of Victoria House, Albion Place, Blackfriars Bridge, S.E., has given to a medicated wool which he has perfected, and which he is now introducing to the trade and the public as a remedy for colds, coughs, and other bronchial ailments. Vinode is put up in screw-capped bottles enclosed in a carton, which bears a portrait of Mr. Wood's youngest son similar to that here presented. This lad was under the care of a West-end specialist for a chest trouble, which ultimately was quite cleared away by means of applications of the wool.

The principal medicating ingredient of vinode is iodine in combination with certain aromatic compounds, which appear to influence its action. Vinode is applied to the chest in thin or thick layers, and is covered with a piece of gamgee tissue. It remains there until the whole of the medicament is absorbed by the skin. The article is to retail at 1s. 1½d., 2s., and 2s. 9d., and chemists can receive from the manufacturer, free of charge, liberal supplies of counter bills and an attractive small showcard, which sets forth the properties of vinode, and is embellished with a picture of the portrait of the cured lad. This picture is to be a sort of trademark for the article.

Warner's Pills for Chemists' Retail.

WE are indebted to Messrs. F. Newbery & Sons, 27 and 28 Charterhouse Square, E.C., for specimens of some of Messrs. W. R. Warner & Sons' sugar-coated pills, put up ready for retailing, with ailment and other names according to the new regulations. Messrs. Newbery have made a study of the subject, and, as mentioned elsewhere, give something special this week in respect to dutiable and non-dutiable names. The object of this note is merely to call

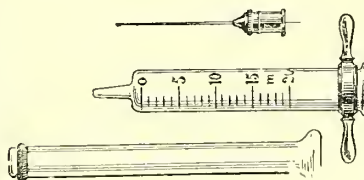
attention to the attractive manner in which the pills are packed for retailing, and the new ideas are also applied to retail packages of compressed drugs made by Messrs. Warner. We call attention elsewhere to the list of liable and non-liable pill-titles which is given in Messrs. W. Warner & Co.'s inset. The list is by no means exhaustive, as the following titles, compiled by Messrs. F. Newbery & Sons, will show. We think we are justified in placing this item under novelties:

Apollo
Aristocrats
Asiatic
Biliary
Corrigent
Corrective
Flatulin
Ferro-lactic
Happy
Kaiser
Reduction
Sanative
Thyroid
Rectifying
Pills of Life
Pil. Vitæ
Pills of Health
New Life

Vita Nuova
Perfect Regulating
Youthful Vigor
Anti-corpulence
Health
Expectorant
Lumbar and Renal (not in use)
Regulating
Relief
Urbanity (mild)
Vital Ton'c
Pyramid
Little Wonder Liver
Railroad
Tree of Life
Log Cabin
Wahoo

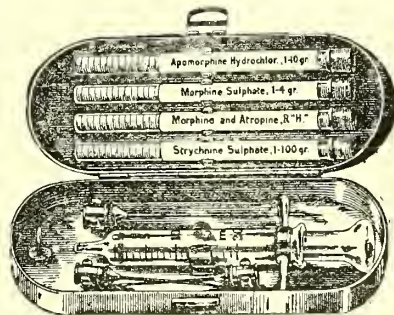
From No. 111.

MESSRS. PARKE, DAVIS & CO., 111 Queen Victoria Street, have introduced a new sulphur-torch for fumigating purposes, the wick of which is ignited at the lower edge of one side, and the ascending flame comes in direct contact with the sulphur, melting it and causing it to ignite and burn freely. The torch is listed at 4s. 4d. per doz. Another novelty is a



glass aseptic syringe consisting of a glass graduated barrel and a glass piston-rod, on which is fitted, in a groove, a tiny ring made of "Durit"—a specially-prepared rubber which is very durable and can be sterilised. The ring gives a perfect vacuum. The needles are of steel, with plated mounts fitting on the ground-glass nozzle of the syringe. Detachable finger-grips are supplied with the syringe, as well as six extra "Durit" rings. A hypodermic pocket-case fitted with this syringe is also supplied at 7s. 6d., complete. This is shown in the second figure. Among other new remedies recently introduced by the firm are brome-

tone, recommended for trial as a hypnotic and sedative; uritone, a urinary antiseptic; effervescent laxative lithia; and effervescent sodium phosphate; germicidal soft soap in collapsible tubes, and lithium salicylate from oil of wintergreen, as well as new compressed tablets of calcium chloride, 5 gr.; iron and quinine citrate, 3 gr.; quinine salicylate, 3 gr.; and soluble mercuric iodide, 8½ gr.



THE annual imports of perfumery into the port of Aden are valued at 800l. They comprise toilet-soaps, extracts, toilet-water, lotions, almost exclusively French. Cheap goods are in demand.

In Lighter Vein. The Pharmacien in Caricature.

A CHOICE OF IDIOMS.—Mr. Brown: "I say, Maria, what's the meaning of 'Sarnier fairy hang,' which I hear you say in all the French shops when they haven't got what you want—which they never have?"

Mrs. B.: "Oh, it only means 'It's of no consequence.'"

Mr. B.: "How odd! Now I always say 'Nimport.' But I daresay it comes to the same in the end."

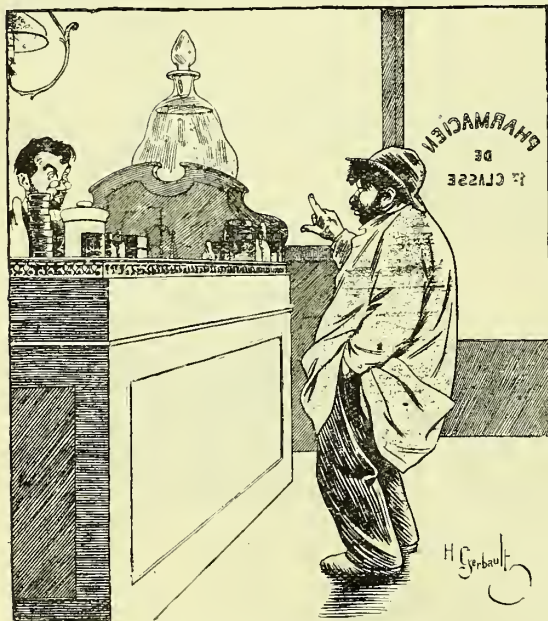
SUCH is the text of one of Du Maurier's characteristic drawings in "Punch's Almanac" for 1888. It represents a middle-aged English couple coming out of a French pharmacy, in spite of the gesticulating despair of the



LES ETRENNES DU PHARMACIEN.

"Permettez-moi, mon cher facteur, de vous offrir un petit ver!"

proprietor, who, pointing over his shoulder, is evidently ready to supply the article or (happy thought or horrible alternative) a "substitute." This turned my thoughts to



"J'VOUDRAIS UN VERRE DE CA."

the fact that the pharmacien figures occasionally, though rarely, in French illustrated comic journalism.

Above, for example, is "The Pharmacien's New Year's Gift" (Anglicé "Christmas box"). It is often the custom to

accompany the "tip" by a glass of alcohol; thus the jocular chemist offers the postman a "petit ver"—the tape-worms preserved in alcohol, which are often more conspicuous than attractive in the window of an officine, enabling him to perpetrate a ghastly pun and indulge in a pleasantry not devoid of "Gallic salt."

The "long drink" is a caricature of more Britannic character. Gerbault sketches a toper who has already made valiant, but unsuccessful, attempts to quench his thirst, entering the officine, attracted by the gleaming and gigantic carboys. Here, he fondly imagines, is a draught deep enough at last; and anxious to judge of quality as well as quantity, he summons the bewildered assistant to give him "A glass of that," with a gesture towards the carboy.

"The Pharmacist's Dinner-party" appeared in the "Pêle-Mêle" recently. By force of habit, in a fit of distraction, the giver of the feast has labelled everything on the table in the orthodox manner. Thus edibles and drinkables are marked "Usage interne," while such sundries as finger-glass, toothpicks, and naturally the spoons and silver, bear the French equivalent of "Not to be taken" ("Usage externe").

The word "tisane" (as everybody who has been in a sick-bed or behind a pharmacy-counter in France knows) is used alike to designate a herb-tea and a cheap class of champagne. Hence, when the jaded clubman in Bac's sketch asks for "tisane" at the close of his meal, the waiter briskly replies, "Yes, sir; Clicquot, sir? Roederer?"

"No, chamomile," is the reply. (This, as a tea, is often taken after dinner, instead of black coffee, by real or fancied invalids in France.)—Our Paris Correspondent.

Business Changes.

MESSRS. KEENE & COMPANY have removed from 76 High Holborn to 8 High Holborn, W.C.

MESSRS. BREWIS & MCINTOSH, chemists, are opening a new branch at Eastney Road, Eastney, Portsmouth.

MESSRS. SQUIRE, WILKINSON & Co., chemists, have opened a high-class pharmacy at 41 St. Leonard's Road, Windsor.

A CHEMIST'S business is being opened in Clowne, near Chesterfield, under the style of the Clowne Drug Company (Limited).

MR. GEORGE NELSON has taken over the business at 73 Salusbury Road, Kilburn, N.W., lately carried on by Mr. Marsh.

MR. T. R. OLDBURY, chemist and druggist, has taken over the business of the late Mr. H. Verdon, chemist and druggist, Knighton, Radnorshire.

MR. W. R. EDWARDS, chemist and druggist, of Market Deeping, has acquired the business of Mr. E. J. King, pharmaceutical chemist, at Midsomer Norton.

MR. JOHN WRAY, late manager of Taylor's Drug Stores, Limited, High Holborn, W.C., has started a drug store on his own account in High Holborn as "Wray & Co."

MR. F. H. BLUMFIELD, chemist and druggist, Erith, Kent, has removed from his old shop, his lease having expired, to new and more commodious premises in Pier Road, Erith, the same street as formerly.

MR. P. G. TREMLETT, chemist and druggist, has taken the premises adjoining the post-office at Fratton Bridge, Portsmouth, and is having them fitted up by Messrs. J. Tanner & Sons, a local firm.

MR. A. A. WATTS, of Sheffield, recently assistant to Mr. Cave, of Southport, has purchased the smart new pharmacy at Ausdell, near Lytham, established and hitherto carried on as a branch business by Mr. J. H. Taylor, of the adjoining town of St. Annes-on-the-Sea.

MESSRS. STEWART, DUNN & DOBSON, chemists, 98 and 100 High Street, Deal, have secured large business premises at 4 Victoria Road, Deal, and will open a new high-class pharmacy there as soon as the necessary alterations have been completed. A new shop-front of teak, with large curved plate-glass windows, is to be put in; the inside fittings are to be of mahogany.

FROM CLOUD

TO

SUNSHINE



FIRST IMPRESSIONS OF ALGIERS.

to rise, and this operates as an inducement to take one of the smart electric trams which whisk by every minute or two.

I was at once struck by the extraordinary number of chemists' shops to be seen in the main road. Here they are, large and small, smart and the reverse. In most French towns the wine-shop constitutes the most salient feature, but here phar-

WITH a hop, skip, and a jump *me voilà* at Algiers, leaving dear old grimy London to its autumnal fogs, rain, and mud. How one's spirits rose as the steamer hove within sight of the jumble of whitewashed houses rising tier above tier up the cliffs, and extending out of sight on either hand, the whole bathed in the warm rays of what I should be tempted to call a midsummer sun, were it not that the term would savour of irony after last summer in England. After the usual scramble through the motley crowd of Arab porters, whose features and gestures recall the balmy days when they practised piracy as a fine art, and raked in every cargo worth the trouble within their sphere of action, the ship moored right on to the quay, so that in a few minutes we emerged on to the Place de la République, the municipal centre of the town. The square is filled with natives of every hue, varying from mere tawinness to that of Nubian blacking, their clothing exhibiting the same lack of uniformity in shape, colour, and texture. We are far from the busy, bustling, serious-faced crowds of London town. The average gait is an easy saunter, and the faces indicate a placid enjoyment of the warmth, devoid of any care for the morrow. From the balcony of the Hôtel de la Régence, the principal town hotel, the square, with its fringe of lofty palms, and the blue sea and harbour beyond, make up a most agreeable *coup-d'œil*.

But my destination is Mustapha Supérieur, which lies two or three miles to the east; so thither I proceed through the rue Bab-Azoun with its arcades and shops brimming over with gaudy tapestries, Kabyl inlaid work, and the thousand odds and ends of Oriental ware. But the road soon begins

macy is triumphant, in appearance at any rate. As we get higher up on the road to Mustapha, overtaking the hotel omnibuses heavily laden with precious spoil in the shape of arrivals and their luggage, the inscription "English Chemist," becomes first frequent, then the rule; but I shall have something to say about this usurpation of title later on. For the time being one's attention is concentrated on the splendid views of the bay and harbour which are to be obtained at every twist of the road—and such twists I have never seen before, at any rate on tram-lined roads. Crowning the peak above is the Mustapha Palace Hotel, with its bleached, aggressively Oriental architecture, and far away, just over the horizon, is visible the smoke of the big steamers wending their way from Suez to Gibraltar or *vice versa*. Yet a turn and one has a panoramic vision of the villas of Mustapha, each snugly ensconced in its bower of exotic verdure. The main road itself is lined by many varieties of trees new to me, the eucalyptus, with its gaunt trunk and tattered branches, from which the bark hangs in big untidy shreds; the pepper-tree, with its "weeping willow" branches and long pendent twigs of red berries; the locust-tree, with its dark-green foliage easily recognised by the fruit rotting on the ground beneath; the rubber-tree, the carroubia *et tutti quanti* (for I never was much of a botanist). But I must not omit reference to the gigantic cacti, the Algerian representatives of the diminutive vegetable monstrosities which timidly bud in English cottage-windows. They bear a fruit, the *figue de Barbarie*, which, I am told, is considered toothsome by the natives. Then, too, it is well to beware of the spiky aloes which lie in wait for the unwary

traveller and, sticking into his calves, remind him that he is mortal.

It is a month now since I landed. During the first fortnight the sun and sky were irreproachable. Newspapers reported storms pretty well all over Europe, with snow, rain, and mud in the intervals, but the serenity of our weather was not molested. The morning brought with it the same blaze of light, the same balmy warmth—for the heat, even at mid-day, is never oppressive—and the same delicious brightness of colour which make the Algerian landscape a ready theme for poets out of employment. Then all at once, in about ten minutes, the clouds came up, like Roderick Dhu's soldiers, from every corner of the heavens, and before one could ejaculate "Jack Robinson" the rain was coming down in bucketfuls and ever since, for some ten days, the prescription has been "rep. mist." In one single night it fell $2\frac{1}{2}$ inches, and the noise of the rain and the overflowing gullies was such that I dreamed I was Jonah, with a vague impression that the whale was lying on my belly. Now and again, during the last ten days, the sky cleared, the sun came forth in all its guilty effulgence, and one's spirits rose several degrees, the roads dried up in a trice, and we began to plan out another excursion; but before the girls had donned their hats, along came a gale strong enough, one would think, to have swept the place into the deep blue sea, followed in due course by another concatenation of waterspouts. With all this atmospheric perturbation the temperature remained warm—that is to say, what would be considered warm in England, viz., between 56° and 60° F. Here, however, people put on their overcoats and capes as soon as the thermometer falls below 60° , and bemoan the inclemency of the weather. Fires, however, are never thought of except by invalids and foreigners, whose habits are determined by the calendar rather than by the thermometer—in fact, we never hear fires spoken of except as a rhetorical embellishment from the pulpit.

Fortunately, there are not many visitors here yet, and those who are seem to assume that an unclouded sky is the essence of the contract. They forget that "into each life some rain must fall, some days must be dark and gloomy." This is the rainy season, and most of the rain falls in December—even so, 60 per cent. of it falls at night, which is something to be thankful for. Anyhow, Algeria is unquestionably an ideal place for the open-air treatment of anything, including consumption. We live in the open air, since, except for an hour or two after sunset,

the air is always agreeably warm, and at night the windows can safely be left wide open, and through the open lattice comes in the fragrance of the eucalyptus and the orange-blossom. The oranges are still of a greeny yellow hue that makes one's mouth water just to look at, for the season is not yet.

In deference to the general opinion that I ought to, I took an Arab bath *à la vapeur*, only, however, to be able to say I

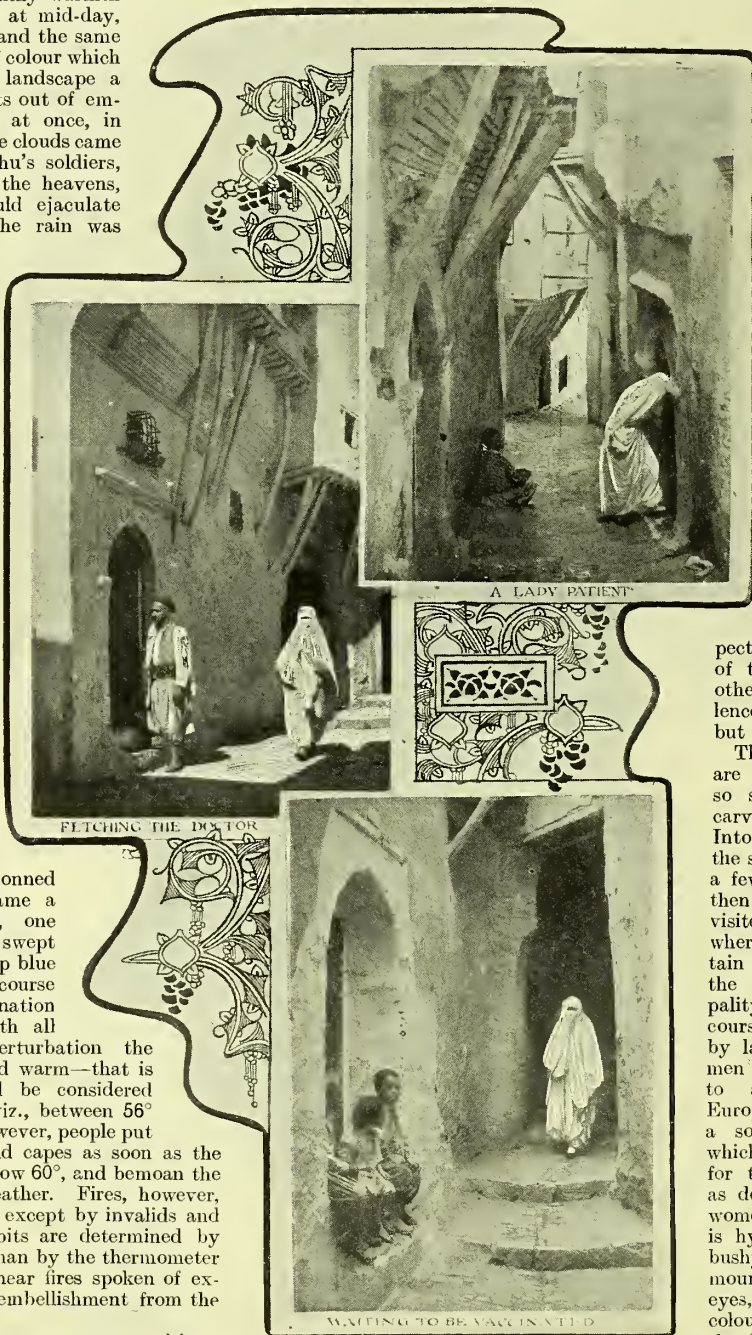
had been there. The establishment is a cellar-like place in the Kasbah (Arab city) bedizened with multi-coloured tiles, and peopled by dark-skinned and perspiring natives who squat round on mats. We undress on a raised platform [in view of everybody, and then we are shut up in another damp cellar, reeking with vapours not wholly aqueous, where, in course of time, two swarthy Arabs take each victim into their laps and punch and pummel him either until he or they are exhausted. The monotony of the proceeding is relieved by "ex-

pectoration practice," each of them vieing with the other in catarrhal excellence. It is picturesque but unclean.

The streets of the Kasbah are tortuous, narrow, and so steep that they are carved into long staircases. Into their dark recesses the sun only penetrates for a few minutes daily, and then only on tolerance. I visited a native dispensary where sick Arabs can obtain medical assistance at the cost of the municipality. The women, of course, are only attended by lady doctors, but the men display no reluctance to avail themselves of European skill. They speak a sort of pigeon-French which leaves ample scope for the imagination, just as does the dress of their women where everything is hypothesis except two bushy black eyebrows surmounting two sparkling eyes, with usually a little coloured tattoo-mark at the base of the nose, the precise significance whereof

I have not yet been able to learn.

A large proportion of the native population are pock-marked, no doubt because it is very difficult for the authorities to lay hands on the young Arabs for the purpose of getting them vaccinated. Vaccination is a rite which they do not understand, and they exhibit very evident traces of nervousness when the doctor approaches them, lance in hand. The youngsters have to be cuffed, and otherwise coerced into com-



pliance. I send you the picture of the mother coming to fetch her offspring, who are anxiously awaiting the ordeal on the nearest doorstep.

Among the cases I saw were several patients suffering from leprosy, but I am told it is almost all of Spanish importation, and it is interesting to note, in confirmation of Mr. Jonathan Hutchinson's hypothesis, that it is popularly ascribed to the



M. OBRECHT'S PHARMACY IN ALGIERS.

eating of imperfectly cured fish, certain parts of the coast of North Africa and Southern Spain being the dumping-grounds of degrees of preserved fish which would not find a market elsewhere.

[The first of the photographs in the headpiece to this article is a view of Algiers, the second is a glimpse taken from the Botanic Gardens. These and the pictures on page 174 are from photographs by an Algerian artist.]

Eczema.

By MEDICO-PHARMACEUTICUS

ECZEMA is the name given to a catarrhal inflammation of the skin. During its course it shows the characters of inflammation—redness, swelling, heat—and also those of catarrh—exudation of serum. Inflammations of the skin caused by known, chemical, or mechanical irritants, which can be withdrawn at will, are usually excluded from the definition, and classed generally as dermatitis, although many of them are in their characters indistinguishable from true eczema.

As to the causation of eczema much difference of opinion exists among authorities, and it cannot yet be said that there is definite scientific evidence pointing to any one cause: one thing only seems certain, that there exists in certain individuals a special vulnerability of skin, predisposing to attack. There seems to be a good deal of evidence supporting the view—held by many of the highest authorities—that the actual exciting cause is organismal, although it must be admitted that no one organism has yet been specifically connected with the disease. Many cases are on record where there is an undoubted connection between the attack—the condition of the nervous system at the time—but whether the nervous condition is an exciting or simply a predisposing cause, it is at present impossible to decide. It might well

be that any profound impression on the central nervous system, intimately connected as this is with all parts of the skin, controlling as it does the nutrition of the skin, so reduces the efficiency of these nutrition-controlling, or trophic, nerves that the vitality of that part of the skin supplied by the affected nerves is so affected as to make it an easy prey to some of the numerous organisms which are always present in it. It is quite conceivable that a similar effect might be produced by chill acting directly on the peripheral nerves. Ordinary catarrh of mucous membranes, such as a cold in the head, or a sore-throat, is a good example of a quite similar chain of events, for here, it is well known, there is first a reduction of the vitality of the tissues involved, followed by an attack of the minute flora which normally inhabits the part, but which under ordinary circumstances is kept in its place by the greater vigour of its host; the quick or retarded recovery of the host becomes then dependent on his ability or inability to resist the inroads of the now much-increased invading army.

THE DIAGNOSIS OF ECZEMA

is not always so easy as would at first appear. If seen during the characteristic "weeping" or catarrhal stage, there is no difficulty, but the forms it takes are so numerous, and their appearance so complicated by the scratching of the patient, that, unless one has had a good deal of experience, it is sometimes difficult to come to a definite conclusion. The first symptoms of an attack are an itching or burning sensation in the part; this is followed by redness, and numerous vesicles containing fluid appear; the whole affected surface now becomes hot and tense; the vesicles usually become torn by the patient scratching, the discharge from them drying and forming crusts. General weeping of the raw surface may take place, which may gradually subside, the part healing under the crusts; a fresh outbreak may take place in the immediate neighbourhood of the initial one, or spreading to distant parts may result. The most prominent feature of the disease may be little pimples instead of vesicles, or there may be simply a dry redness and scaliness apparent. In a very severe attack there may be constitutional symptoms, but there is seldom fever; the worst effects are the sleeplessness and nerve-tension caused by the irritation and intolerable itching, which are very frequent, especially at night. The attack may pass off, the last stage being that of desquamation, the new epidermis being shed in scales, which get smaller and thinner as the condition subsides. Chronic red scaly patches may, however, remain, and these occasionally become the starting-point of another acute attack. It should not be forgotten that the itching is often worst when there is least to be seen, the exudation being in such cases in the deeper layers of the skin, and, from its inability to escape freely, causing pressure on the nerves of the part; this is particularly the case in the scalp. Before attempting to diagnose a doubtful case, all crusts should first be removed, either by means of warm fomentations, or, better still, of a starch poultice.

ALLIED DISORDERS.

Syphilitic rashes, scaliness, and syccosis of the chin are apt to be mistaken for eczema. The first can be excluded by the history and the presence of other syphilitic symptoms; in the case of the second, when the humours of the itch-mite can be seen, the case presents no difficulty. Moreover, the lesions are always grouped in patches, not isolated as in the case of eczema; they have no spreading edge, and have a special fondness for the spaces between the fingers, the armpit, the wrists, and the inner side of the thigh. Syccosis of the chin—a septic inflammation acquired by the inoculation of pus from a dirty razor or shaving-brush—shows no tendency to spread beyond the hair-area, but is sometimes difficult to differentiate from eczema. Psoriasis is usually readily distinguished by the sharply-defined border of its patches and its silvery-white scales, those of eczema being yellowish and crumbling. Perhaps a word of caution with regard to erysipelas will not be out of place here, as it is an infectious and dangerous disease. It can always be excluded by the marked constitutional symptoms—high temperature and pulse—which accompany it; its well-marked margins are also characteristic.

TREATMENT.

The prevalent superstition as to the danger of "driving in" the disease is very neatly disposed of by Morris, who says:

Even if the abrupt soothing down of the cutaneous phenomena deprecated by Brocq were as dangerous as he thinks, the practitioner need not be afraid to treat them, since it is quite exceptional for the disease to be abruptly soothed down by any means at our disposal.

It will be gathered from this statement by one of the greatest authorities on the subject that the cure of eczema is not by any means so easy or so certain as the advertising pages of the newspapers would lead us to believe. The use of internal remedies is now to a great extent discarded by skin-specialists. Arsenic is considered in many cases to do more harm than good, and the cases in which it is of benefit are few. The general principles of treatment in severe cases are complete rest of body and mind, avoidance of extremes of temperature and of stimulants, simple diet, and regulation of the bowels. Where the inflammation is very acute and the patient shows no marked depression, vin. antimon. $\text{m} \times$. every two hours for twelve hours, then reduced to $\text{m} \text{v}$. three times daily, will be found to reduce arterial tension and so modify the inflammation. Any accompanying diseases, such as dyspepsia, gout, or rheumatism, should of course be treated with appropriate remedies, and it may be noted here that gout is not now considered to be a cause of eczema.

Useful as internal medication may be, there is no doubt that it is to local treatment that one must look for the cure or alleviation of eczema. Certain principles must guide us—viz., (1) When the disease is in the acute stage, use soothing applications; (2) when the disease has become chronic, stimulate; (3) before commencing treatment remove any crusts or scabs, so that free access for the medicament to the affected tissue may be assured. This may be readily effected by means of oil applied on lint, by weak solutions of sodium bicarbonate, or by a starch oleatic poultice.

As most of the cases which come under the notice of the chemist are not of a very severe type, it will suffice to give some formulæ which have been found from experience to be useful in the treatment of the various types.

ACUTE ECZEMA WITH OOZING.

Wash with 1-in-60 solution of boric acid, and dry with a muslin-bag containing starch-powder to which has been added a trace of boric acid. Do not dry with a towel. If the affected surface is large and too sensitive for the watery application, dredge over it some flour containing a trace of boric acid. After the acute symptoms have subsided the part may be washed with soft or distilled water; hard water must never be used. If soap is used at all it must be superfatted and of the best type. The inflamed surface must then be protected from the air by a piece of lint, on which may be smeared the following preparation recommended by Morris:

Zinci oxidi	...	...	...	...	3vj.
Lanolini	...	...	...	...	3ij.
Ol. olivæ opt.	...	...	...	...	3j.
Aq. calcis	...	...	...	...	3j.

M.S.A.

A good cold-cream answers equally well, and has also the cooling property aimed at by the lime-water in the prescription. When the inflammation has sufficiently subsided, the use of parasiticide applications may be proceeded with, and Lassar's paste may be taken as a type of these:

Acid. salicylic.	...	...	...	...	gr. x.
Vaselini	...	...	...	...	3ss.
Zinci oxidi	...	...	...	...	3ij.
Pulv. amyli	...	...	...	...	3ij.

M.S.A.

This should be applied on linen or lint. If a large surface is affected the patient should be kept in bed.

MOIST ECZEMA

of ordinary type where the symptoms are not very acute. For this form the best application is ung. emp. plumbi applied to the part on linen or muslin:

Emp. plumbi	...	...	...	...	} partes æquales
Vaselini	...	...	...	...	

M.S.A.

After this has produced the desired effect, a favourite application for promoting perfect proliferation, and so producing a smooth epidermis, is the following:

Pyrogallol. oxidat.	...	...	...	gr. xv.
Acidi salicylici	...	...	...	gr. x.
Ichthyolis	...	...	...	gr. xv.
Vaselini	...	...	...	3j.

M.S.A.

This should be applied like the last, but should not be applied to very large surfaces on account of the risk of pyro-absorption and consequent toxic effects. Oxidised pyro is used, because it has been found to be less poisonous than the ordinary acid.

For the moist forms, often seen behind the ears and in other situations in young children, Dr. Allan Jamieson recommends the following cold-cream:

Lanolin.	...	...	...	3ss.
Ceræ alb.	...	...	...	3ss.
Acidi salicylici	...	...	...	gr. x.
Ol. amygd.	...	...	...	3ss.
Aq.	...	...	...	3ss.

M.S.A.

PAPULAR ECZEMA,

affecting extremities of limbs. Use the following, and exercise great discretion in washing:

Resorcin.	...	...	...	gr. x.
Ung. zinci	...	...	...	3j.

M.S.A.

ITCHING ECZEMA,

affecting face and flexures of joints, is still strongly held by some competent authorities to be caused by digestive disturbances. These should, therefore, always be looked to. Numerous local applications are in favour for the relief of the itching. Liq. plumbi dil., kept applied on lint, is probably as effective as anything, and the cure can be completed with Lassar's paste. If there is no scalliness the part should not be washed, but if scaly the scales may first be removed with soft water and superfatted soap.

SWEAT ECZEMA,

common on the back of the neck and face after profuse perspiration, is best treated by the occasional application of the following lotion:

Acidi borici	...	...	...	3ij.
Calaminæ	...	...	...	3ij.
Aq. rosæ ad	...	...	...	3iv.

M.

There is a common form of eczema which appears in nummular patches on the skin of children, and is due to defective nutrition. The best cure is feeding and country air, aided, perhaps, by the calamine lotion mentioned above. The same form in adults is usually a sign of some grave constitutional condition, and should be referred to a physician.

CHRONIC PATCHES OF ECZEMA

are often exceedingly troublesome, and the pharmacist is often asked for something to relieve or cure them. When there is violent itching, daubing with the following lotion gives great relief:

Acidi carbolici	...	...	...	3j.
Glycerini	...	...	...	3ij.
Aquam ad	...	...	...	3viij.

M.

An ointment composed as follows is also very effective:

Acidi tannici	...	...	...	3j.
Acidi carbolici	...	...	...	gr. v.
Cremor. frigid.	...	...	...	3j.

M.S.A.

Preparations of tar are sometimes very effective, but must be used with discretion. For the cure of persistent chronic patches after the itching has subsided, the following is a good ointment:

Sulphur. præcip.	...	...	...	gr. x.
Hydrargyri ammon.	...	...	...	gr. x.
Camphoræ	...	...	...	gr. iv.
Vaselini	...	...	...	3j.

M.S.A.

If no great irritation results the sulphur may be increased. The ointment must be kept applied, as mentioned previously, on lint or muslin. Ointments of yellow oxide of mercury and of chrysarobin are also effective; the latter may be used in the proportion of from 10 gr. to 1 dr. in 1 oz. of a mixture of lanolin and vaselin, but the weaker ointment should be used to commence with, and the patient warned about the soiling of linen it produces. If it causes redness and pain it should be discontinued.

Varicose veins in the legs are often complicated with eczema, which should be treated on the principles already laid down. No treatment will, however, be effective unless an elastic stocking or bandage is worn, and this should be applied before the patient gets out of bed in the morning, and not taken off until he is again in bed. Severe cases must have complete rest with elevation of the limb.

A common form of eczema is that occurring on surfaces subject to chafing, such as the scrotum, the vulva, and between the buttocks. The only effective treatment in such cases is to keep the surfaces apart with lint, muslin, or other suitable material which has been impregnated with a good antiseptic dusting-powder, such as the following:

Pulv. amyli ...	...	...	3j.
Pulv. acidi boric. ...	...	...	3j.
Pulv. crete gall. ...	...	...	3vj.

M.

Perfume suitably.

Fifteen grains of salicylic acid may be substituted for the boric acid.

A Fifteenth-century Physician.

IN medicine, as elsewhere, *vixere fortes ante Agamemnon* is a truism worth keeping in mind. Most people regard the physicians of the Middle Ages as glorified quacks; but, in reality, there is a long roll of *fortes*, beginning with the Arabians, that offers material for a fascinating study. To the most casual reader, such names as Mesua and Avicenna readily occur; and there is a multitude of little-known authors whose works still remain in manuscript.

The print reproduced on this page represents a physician giving directions about the use of ointments. Both doctor and subordinate (either a surgeon or a barber-surgeon) are wearing the long pointed shoes which were just going out of fashion. Of their assembly of patients, almost all appear to have forgotten the fact dwelt on by the heroine of Gilbert and Sullivan's "Ruddigore"—"it's rude to point." The person on the left at the back, indeed, is pointing with both forefingers, and the lady in the bed is doing the same as far as the weak condition of her left arm will allow. Medicos and patients alike are looking, too—for reasons best known to themselves—out of the corners of their eyes. As a detail of drawing, it is interesting to notice the conventional representation of the feet—a common feature of very old prints.

The ointments on the table probably justified the familiar phrase, "a whole apothecary's shop in a gallipot": the authorities accessible in the fifteenth century were firm believers in polypharmacy. Their simples, like German repositions, were very adaptable, and could be put to apparently contradictory uses. Specimens of their formulæ have so often been given that there is no object in quoting any here; but it is worth while pointing out that the rough-and-ready explanation of inherent stupidity, or the alternative one of "a double dose of original sin," will hardly account for them. The fact is that in the Middle Ages no department of learning could escape the influence of scholasticism; and the scholastic habit of mind, involving the student in endless discussion of details, tended to make him attach more importance to these than to the wider aspects of his subject. Hence the readiness to accept the conclusions of any argument, if only it were a learned one; hence, too, the credulity of the uneducated—on the old principle of *omne ignotum pro magnifico*. How slow the belief in the marvellous was to die out is strikingly shown in an entry in Pepys' Diary, written about two centuries later than the date of our print: "Several fine experiments were shown [at a

meeting of the Royal Society] . . . of liquors: among others, of one that did . . . turn a piece of roasted mutton into pure blood, which was very rare."

And yet this bland unquestioning faith is not exactly ridiculous. "In the country of the blind, the one-eyed man is king"—on which principle it may be allowed that the



A DOCTOR'S VISIT TO A PATIENT.

Lecture on compounding and use of ointment. From a medical treatise of 1482.

British public of the fifteenth century had some reason for putting their trust in the "spagyric remedies" of their doctors. Even in those days, though, there were sceptics. Margaret Paston, writing in 1464 to her husband, begs of him: "Also for Goddys sake be war what medesyns ye take of any fysissyans of London; I schal never trust to hem be cause of your fadr and myn onkel, whoys sowlys God assouyle."

New Books.

Clarke, Dr. J. H. *Life and Work of James Compton Burnett*, M.D. 7½ × 5. Pp. 142. 2s. 6d. (Homœopathic Publishing Company.)

Clowes, F., Coleman, J.B. *Elementary Practical Chemistry*. Part 2: Analytical Chemistry, Qualitative and Quantitative. 4th ed. 7½ × 4½. Pp. 228. 2s. 6d. net. (Churchill.)

Plauzoles, S. de. *Consumption: its Nature, Causes, Prevention, and Cure*. Trans. from the French by E. H. Hall. 6½ × 4. Pp. 200. 1s. (W. Scott.)

Vincent, R. *Nutrition of the Infant*. 8½ × 5½. Pp. 314. 10s. 6d. net. (Baillière.)

Wall, O. A. *Notes on Pharmacognosy*. 2nd ed. 7½ × 5½. Pp. 705. (Gust Banknote and Litho. Company, St. Louis, Mo.)

Determination of Alcohol in Tinctures.

By T. F. HARVEY, Ph.C.

(From the Research Laboratory of Boot's Pure Drug Company.)

THE determination of alcohol in tinctures containing essential oils and other volatile constituents is usually carried out in the manner described by Allen—viz., dilute to several times the original bulk, and precipitate calcium phosphate within the liquid, filter, and distil. Thorpe ("Journal of Chemical Society," March, 1903, and C. & D., February 7, 1903, page 234) has recently described the method in use in the Government Laboratory in dealing with such preparations as spirit of ether, spirit of camphor, and tr. chlorof. et morph. co. This excellent method, however, occupies too much time and attention for the routine examination of tinctures. A great disadvantage of the calcium phosphate method is the necessity of diluting the tincture from four to eight times. The alcohol percentage corresponding to the sp. gr. has then to be multiplied by the same factor, consequently increasing to a similar extent the combined error of the sp. gr. determination and of the alcohol-tables. On the other hand, limited dilution is excluded in a number of cases by the large amount of precipitated resin, which, occupying an appreciable volume, prevents the portion taken from being a true aliquot part. These errors may be largely avoided by subjecting the tincture to distillation in the first instance, and then treating the distillate with kieselguhr, to remove undissolved oil. The dilution in no case need exceed three times the original volume.

For combining accuracy with rapidity, it is best to observe the following details. Heat water in a large vessel (an enamelled iron basin, 12 inches by 4½ inches, answers well) to 15.5° C., and maintain at this temperature by adding from time to time some warmer or colder water. Place the bottles containing the tinctures in this bath for a short time. Measure 50 c.c. of tincture in a graduated flask at 15.5° C. Transfer to a 500 c.c. conical flask, rinsing out with two or three portions of water, amounting to 70 c.c. in all, so that the total volume in the distillation-flask is about 120 c.c. To prevent frothing and bumping, add two or three drops of liquid paraffin B.P., and some ignited pipeclay. Distil slowly over a rose-burner 97 c.c. into a 100 c.c. flask, and make up the volume to 100 c.c. at 15.5° C. with distilled water. If the distillate is clear and bright, or very nearly so, the sp. gr. is determined, and the corresponding percentage of alcohol multiplied by 2. If the distillate is in any degree turbid, add to it 0.5 gram of kieselguhr which has been washed free from soluble matter and dried. Stand for a short time (about ten minutes), with frequent shaking in as cold water as is obtainable. Filter rapidly through a plaited filter, rejecting the first portion, and take the sp. gr. of the clear filtrate at 15.5° C.

With regard to the kieselguhr, all samples are not satisfactory; dimatos answers very well. Latterly I have found washed kaolin quite as good, if not better.

The above dilution has been found sufficient in a large number of cases. These are marked in the table given in a separate paper, 1-2. For some eighteen tinctures (marked in the table 1-3) 50 c.c. is taken and diluted with 120 c.c. of water; the distillate is received in a 150 c.c. flask, 145 c.c. being collected. In this case the percentage of alcohol found from the table is multiplied by 3.

If there be any doubt as to whether a tincture has been sufficiently diluted, it may be set at rest by further diluting the filtered distillate, when no more precipitation of essential oil must occur.

Tr. Benz. Co., Tr. Cubeba.—These tinctures require more kieselguhr (1 gram), and rather more shaking.

Tr. Asafetida, Tr. Cubeba, and possibly others, yield distillates containing sufficient oil to form a separate layer on the surface. In such cases the adjustment to volume should be made so as to exclude the floating oil, the dividing line between oil and spirit being made to coincide with the mark on the flask.

Tr. Kino.—Dilute 50 c.c. to 200 c.c. and distil 150 c.c. only. The distillate will then be free from glycerol.

Tr. Opium Ammon., Tr. Valer. Ammon.—These tinctures require two distillations to produce a neutral distillate; the first distillation must be from a strongly acid solution—say, for

Tr. opium ammon. 50 c.c. + 25 c.c. acid. sulph. dil. + H₂O 45 c.c. &c.

Tr. valer. ammon. 50 c.c. + 15 c.c. acid. sulph. dil. + H₂O 55 c.c. &c.

100 c.c. is collected in each case, returned to the cleaned distilling flask, made alkaline with potash solution, water added to make 170 c.c. for tr. opium ammon., or 120 c.c. for tr. valer. ammon., and redistilled. Unless sufficient acid is present in the first distillation, ammonium benzoate and valerianate pass over, and ammonia is found contaminating the last distillate.

Resinous Tinctures.—These, especially tr. benz. co., appear to yield low results if the distillation proceed too quickly. Practically the whole of the alcohol is obtainable, however, on conducting the operation slowly.

Excessive Frothing.—This frequently occurs, especially in an alkaline solution, but is entirely prevented by a trace of heavy paraffin oil, as directed. Some fragments of pipeclay should also be added, as, with these additions, any tincture may be smoothly and regularly distilled over a rose burner.

Precautions Necessary to Ensure Accuracy.

1. The same thermometer should be used for the adjustment of all temperatures. It should be graduated in ½° C. or preferably ⅓° C.

2. All measuring-flasks used must be carefully verified and marked to contain the proper quantity of water, or at any rate to agree among themselves.

3. The joints between flask and condenser must be made with rubber corks or sections of rubber tubing. A tapering adapter bent at a suitable angle should lead from the condenser right into the receiving-flask till near the end of the distillation.

4. Since a difference of 0.0001 in the sp. gr. is equivalent to a difference of from 0.06 to 0.09 per cent. of alcohol, over the portion of the tables used, it is desirable that the sp. gr. should be known to 0.0001. This means that if consecutive determinations be made using a 10-gram Sprengel tube, the weighings must not differ by more than 1 milligram.

5. The kieselguhr (or kaolin) must be well washed and dried till no further loss of weight occurs.

The advantages as compared with the calcium-phosphate method, are that—

1. Partial elimination of the error due to dilution, and complete elimination of that due to precipitated resin, are secured.

2. The method is more simple and rapid.

3. Evaporation during filtration is minimised.

4. There is at no stage any difficulty caused by froth in the adjustment to volume, to which one is very liable when dilution and filtration precede distillation.

5. A bright liquid is always obtained for the sp. gr. determination.

Tinctures of the British Pharmacopœia.

By T. F. HARVEY, Ph.C.

(From the Research Laboratory of Boot's Pure Drug Company.)

THE following table of figures has been compiled from analyses of tinctures prepared in our laboratories during the last few years. It should be noted that all these figures relate to practically fresh tinctures; and since many of these are liable to deposit to some extent on keeping, it is probable that after a time figures varying somewhat from the original analyses would be obtained. A slight loss of alcohol also occurs in tinctures as stored and sold in commerce. The number of samples on which the figures are based is recorded in every instance.

Sp. grs. have been determined with delicate hydrometers, these being calibrated and used along with a table of corrections.

Total solids were invariably determined in flat-bottom

nickel dishes, 7 cm. in diameter by 2 cm. deep, 10 c.c. of tincture being evaporated in most cases, and the residues dried to constant weight in the water-oven (temperature = 98° to 99° C.). The following tinctures were specially treated:

Tr. Benz. Co.—Ten cubic centimetres was diluted to 100 c.c. with alcohol, and 10 c.c. (=1 c.c. tincture) evaporated, remoisten-

ing the residue two or three times with absolute alcohol till constant.

Tr. Rhei Co.—Ten cubic centimetres was diluted to 100 c.c. with 60-per-cent. alcohol, and 10 c.c. evaporated, remoistening the residue thoroughly and repeatedly with a drop or two of water till quite constant.

Tr. Asafetide.—The figures given are on 10 c.c. of tincture. It

Tinctura	No. of Samples	Sp. Gr. at 15.5° C.	No. of Samples	Total Solids at 98–99° C.	No. of Samples	Alcohol by vol.	Dilution of Tincture in Alcohol-determination	Remarks
				Per cent.		Per cent.		
Aconiti ...	10	0.8965–0.8975	5	1.4 – 1.7	5	68.8–69.4	1–2	
Aloes ...	10	0.979 – 0.985	5	8.1 – 8.25	5	37.9–41.1	1–2	
Arnica ...	19	0.893 – 0.896	9	0.72– 0.93	7	68.0–70.1	1–3*	
Asafetide ...	10	0.920 – 0.927	13	9.75–11.7	6	60.3–61.9	1–3*	
Aurantii ...	10	0.878 – 0.882	5	1.74– 2.0	5	74.9–75.8	1–3*	
Belladonnae ...	25	0.912 – 0.917	8	0.71– 0.92	8	60.3–61.8	1–2	
Benzoini co. ...	28	0.896 – 0.902	15	14.4 – 16.8	12	72.0–74.5	1–3*	Distil alcohol from slightly alkaline solution
Buchu ...	13	0.927 – 0.932	6	3.5 – 4.0	5	56.4–58.4	1–2*	
Calumbae ...	13	0.917 – 0.920	8	0.83– 1.2	6	58.6–59.9	1–2	
Camphorae co. ...	27	0.916 – 0.919	12	0.26– 0.42	10	56.8–59.7	1–3*	Distil alcohol from slightly alkaline solution
Cannabis indicæ ...	15	0.844 – 0.850	7	4.2 – 4.7	9	84.3–87.2	1–3*	
Cantharidis ...	18	0.8345–0.837	10	0.14– 0.29	7	88.2–90.1	1–2	
Capsici ...	13	0.892 – 0.895	7	0.89– 1.3	5	67.5–70.2	1–3*	
Cardamomi co. ...	27	0.943 – 0.948	11	5.54– 7.28	8	54.0–57.5	1–2*	
Cascarillæ ...	12	0.895 – 0.901	7	1.4 – 3.5	6	67.5–68.9	1–2*	
Catechu ...	16	0.973 – 0.983	7	14.1 – 16.3	6	52.4–53.8	1–2	
Chiratae ...	6	0.921 – 0.925	3	1.63– 1.83	3	57.4–58.8	1–2	
Chlor. et morph. co. ...	6	1.0 94–1.014	—	—	2	53.4–54.5	1–4	Determine alcohol by Thorpe's method (calculated alcohol = about 54 per cent.)
Cimicifugæ ...	11	0.920 – 0.925	6	1.43– 2.11	4	58.1–59.4	1–2	
Cinchonæ ...	16	0.916 – 0.922	6	5.82– 7.36	6	64.8–66.5	1–2	
Cinchonæ co. ...	21	0.910 – 0.915	9	4.76– 5.36	7	65.0–67.6	1–3*	
Cinnamomi ...	13	0.900 – 0.904	8	1.83– 2.41	6	66.9–68.5	1–2*	
Cocci ...	7	0.954 – 0.958	5	2.15– 2.94	5	42.4–43.4	1–2	
Colchici seminum ...	10	0.956 – 0.962	7	2.66– 4.1	5	42.1–43.8	1–2	
Conii ...	9	0.8955–0.900	6	1.32– 3.53 (?)	6	67.5–68.8	1–2*	
Croci ...	8	0.923 – 0.925	6	2.4 – 2.66	4	57.5–58.6	1–2	Twelve samples pure saffron, extracted with 60-per-cent. alcohol, yielded 51.8–55.9 % dry extract
Cubebæ ...	9	0.845 – 0.849	5	1.8 – 2.51	4	84.1–86.0	1–3*	
Digitalis ...	16	0.928 – 0.933	7	3.6 – 4.16	6	56.8–58.9	1–2	
Ergotæ ammon. ...	2	0.934 – 0.9375	2	3.83– 5.01	2	51.5–52.6	1–2*	Distil alcohol from slightly acid solution
Ferri perchlor.† ...	27	1.087 – 1.108	—	Fe ₂ O ₃ = 7.2–8.0	5	22.5–23.2	1–2	
Gelsemii ...	14	0.919 – 0.9215	9	1.21– 1.72	8	58.3–60.1	1–2	
Gent. co. ...	22	0.962 – 0.967	11	3.9 – 5.28	7	41.8–43.8	1–2*	
Guaiaici ammon. ...	11	0.898 – 0.908	6	15.2 – 17.8	6	69.8–73.0	1–3*	Distil alcohol from slightly acid solution
Hamamelidis ...	12	0.953 – 0.956	7	2.35– 2.5	6	43.0–43.9	1–2	
Hydrastis ...	10	0.921 – 0.924	6	2.03– 2.26	5	57.8–59.1	1–2	
Hyoscyami ...	16	0.954 – 0.959	10	2.33– 3.02	8	42.6–44.8	1–2	
Iodi ...	35	0.879 – 0.881	—	—	—	—	—	True sp. gr. = 0.8800
Jaborandi ...	15	0.952 – 0.962	8	2.3 – 5.1	8	41.9–44.4	1–2	
Jalapæ ...	7	0.906 – 0.912	4	3.9 – 5.3	3	65.6–68.4	1–2	
Kino ...	8	0.989 – 0.998	—	—	5	51.6–52.3	1–3	Dilute 50 c.c. to 200 c.c., and distil 150 c.c. (not more)
Krameria ...	12	0.934 – 0.944	6	4.7 – 6.4	5	55.8–58.2	1–2	
Lavand. co. ...	20	0.836 – 0.838	7	0.53– 0.61	7	87.2–89.2	1–3*	
Limonis ...	3	0.879 – 0.882	2	1.60	1	74.2	1–3*	
Lobeliaæ æther. ...	10	0.813 – 0.818	5	1.9 – 2.4	2	63.1–63.6	1–4	Determine alcohol as Thorpe
Lupuli ...	16	0.927 – 0.933	6	3.25– 5.1	4	56.1–58.0	1–2*	
Myrrhæ ...	42	0.852 – 0.857	26	5.0 – 6.6	12	83.1–86.4	1–3*	
Nucis vomicae ...	29	0.906 – 0.912	10	1.98– 2.22	10	63.7–65.8	1–2	
Opil ...	61	0.952 – 0.960	14	3.37– 4.2	17	43.9–46.1	1–2	
Opil ammon. ...	10	0.897 – 0.901	7	0.67– 1.34	6	63.2–65.6	1–3*	For alcohol - determination, see note, p. 178
Podophylli ...	7	0.847 – 0.849	3	3.4 – 3.51	3	86.6–88.4	1–2	
Pruni virg. ...	8	0.934 – 0.937	4	3.33– 3.44	3	54.9–55.7	1–2	
Pyrethri ...	12	0.896 – 0.901	5	1.41– 2.35	4	67.6–68.9	1–2	Moor records 0.56 solids in a tincture made B.P.
Quassia ...	9	0.946 – 0.949	5	0.55– 0.75	3	43.1–44.7	1–2	
Quillaia ...	7	0.9175–0.921	4	1.2 – 1.45	4	59.2–50.2	1–2	
Quinine ...	27	0.887 – 0.894	9	3.51– 3.96	7	73.0–75.2	1–3*	[solution
Quinine ammon. ...	84	0.925 – 0.928	15	1.72– 1.86	20	52.9–55.0	1–2	Distil alcohol from slightly acid
Rhei co. ...	31	0.968 – 0.977	18	4.0 – 6.06	15	49.6–53.2	1–2*	Total solids are exclusive of glycerol
Scilla ...	26	0.960 – 0.970	10	9.38–12.4	7	51.9–54.6	1–2	
Senega ...	10	0.935 – 0.940	5	5.45– 6.79	4	56.4–58.0	1–2	
Senna co. ...	12	0.988 – 0.9985	6	9.0 – 11.7	6	39.0–41.1	1–2*	
Serpentariae ...	8	0.897 – 0.900	4	1.6 – 1.79	3	68.3–69.1	1–3*	
Stramonii ...	4	0.963 – 0.966	3	3.63– 4.71	3	42.0–43.3	1–2	
Strophanthi ...	12	0.891 – 0.8935	7	0.33– 0.64	5	68.7–69.2	1–2	
Sumbul ...	18	0.898 – 0.904	12	2.74– 3.4	8	66.3–68.8	1–2*	[solution
Tolutana ...	12	0.866 – 0.869	7	7.95– 8.68	5	80.8–83.1	1–3*	Distil alcohol from slightly alkaline
Valeriana ammon. ...	18	0.934 – 0.940	9	3.06– 3.62	7	51.5–53.8	1–2*	For alcohol - determination, see note, p. 178
Zingiberis ...	35	0.837 – 0.840	11	0.44– 0.9	8	87.2–89.7	1–2	

* These tinctures require kieselguhr.

† This tincture varies, as the liquor has been prepared according to the official directions or made to contain the stated Fe₂O₃ content of 32 per cent. grams.
c.c.

is less tedious to evaporate 2 c.c. (measured from a delicate pipette—say, one graduated in $\frac{1}{10}$ c.c.), remoistening with absolute alcohol till constant. The results are then lower than those given by about 0.5 per cent.

Tr. Myrrhæ.—Five cubic centimetres is evaporated with the aid of alcohol.

Tr. Sennæ Co.—It is less tedious to evaporate 5 c.c.

Alcohol.—This was determined either in the manner described in the first paper or by the calcium phosphate method. In the case of *tr. chloroform. et morph. co.*, and *tr. lobeliæ æther.*, Thorpe's method was adopted. Hehner's alcohol-tables, published in the "Analyst," 1880, were used throughout.

A Mortar-grip.

BY WILLIAM LISTER.

FOR a considerable time past there have been numerous inquiries from pharmacists and others for someone to come forward with an efficient apparatus which would firmly secure a mortar while in use for making various pharmaceutical products on a small scale.

An ointment or paste of any description is much easier and more thoroughly mixed with the aid of a mortar and pestle than with the unsatisfactory ointment-slab. For in

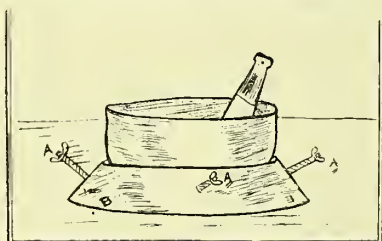


FIG. 1.—MORTAR IN THE GRIP.

stance, when 4 oz. of some stiff ointment-base has to be incorporated with two or three drachms of a dry drug or chemical (where the application of heat is not necessary), it will be found a very difficult matter to work the whole quantity perfectly smooth, unless the dry powder is first of all rubbed up with a small portion of the ointment-base—the method usually adopted. But why not mix the whole 4 oz. in the mortar—it would be a much simpler process? Because in ninety-nine cases out of a hundred the mortar will

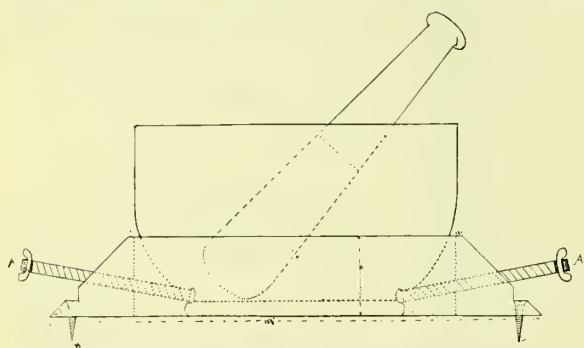


FIG. 2. (Original measures 15 $\frac{3}{4}$ inches at base).

commence a kind of circular tour, moving in the same direction as the rotating pestle, and under these circumstances dispensing an ointment becomes a tedious process unless one resorts to the uncomfortable method of tightly clamping the mortar with the left arm—a procedure which tends to decrease the amount of energy that should be centred on the pestle. This new device for gripping the mortar entirely obviates the arm-clasping business. A rough idea originally appeared in these columns about two years ago, in connection with the annual *Diary* competitions. This more elaborate contrivance has been sub-

mitted to several well-known firms of druggists' sundries-men, all of whom have approved of it. In some cases it would be advisable to have two different sizes of the gripper, although one with dimensions given in sketch will be found a most convenient size—this will take mortars Nos. 5, 6, 7, 8, and 9. The idea is applicable to several existing forms of steam-mortars, and would dispense with the innumerable wooden wedges, which often get mislaid. The long screws,

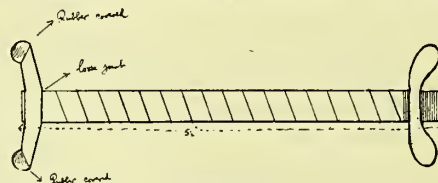


FIG. 3.—SCREW A (length 5 $\frac{1}{2}$ inches).

A, are each fitted at the grip end with a loose joint or swivel, so that when the screw is tightened—according to size of mortar in use—the swivel remains stationary. The extremities of this swivel are covered with indiarubber, which insures a firmer hold than the bare metal. There are three of these gripping-screws. The three ordinary screws,

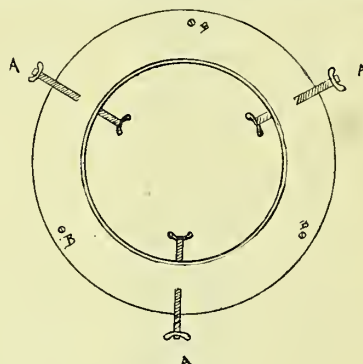


FIG. 4.—PLAN.

B, are for the purpose of securing the whole arrangement to the counter. The device could be made in either wood or metal—metal for preference: wood has a tendency to split.

An up-to-date manufacturer would certainly reap a benefit were he to put the grip on the market. Chemists would with it be spared the somewhat crude and old-fashioned way of driving nails, triangular fashion, into the bench.

WHY NOT?



(From "Spy.")

Practical Notes and Formulæ.

STRONTIUM BROMIDE.

A GREAT many substances, particularly drugs containing tannin, as well as soluble salts of sulphuric, carbonic, phosphoric, and oxalic acids, are incompatible with strontium bromide. Miss Mussion, who records the above in the course of a thesis to the Philadelphia College of Pharmacy, also notes that red sanders and cochineal, pepsin, and alkaloidal sulphates give precipitates, the inference being drawn that strontium bromide is best prescribed alone.

VISCINUM DEPURATUM.

THE birdlime produced from the mistletoe is suggested as an alternative to indiarubber in applications for the skin. Birdlime is less irritating and in plasters more easily tolerated than rubber. To purify birdlime it is warmed and strained to get rid of insoluble residue, the filtrate is then washed with warm water until the water is clear and neutral. The birdlime is next placed in a flat dish and kept at a temperature of from 40° to 50° C. for some time until the smell disappears. The substance is then dissolved in benzene and filtered and decolourised by shaking with starch or French chalk, or even potassium permanganate. The mixture is allowed to stand till clear and decanted. The solution may be used *per se* as a paint in skin affections or medicated and coloured as desired.

MAGNESII SULPHAS EFFERVESCENS.

IN a thesis presented to the Philadelphia College of Pharmacy Mr. W. H. Smith gives the following formula for effervescing Epsom salts. We have put the B.P. proportions at the side of Mr. Smith's figures for comparison, the product being different, but whether inferior or superior we are unable to say:

	Smith	B.P.
Magnesium sulphas	50	50
Sodium bicarbonate	50	36
Acid, tartaric	27	19
Acid, citric	19	12.5
Pulv. sacchari	—	10.5

Mr. Smith dries the Epsom salts to loose 60 per cent. of its weight; the B.P., 23 per cent.

A POPULAR HAIR-PREPARATION.

THE "Pharm. Zeitung" recently published some interesting observations on a hair-wash which is very popular in Germany, and which is said by an analyst to contain 1 part of tallow, 5 parts of lemon oil, $\frac{1}{2}$ part of potassium carbonate, and water to 100 parts. In whatever way this analysis is followed in compounding, the result is not at all like the popular article. The writer in our contemporary has tried to settle the problem, and ascertained that the hair-wash contains liquid extract of cinchona and saponin, the latter being to emulsify the oily matter present, which, he believes, plays an important part in the undoubtedly excellent results produced by the hair-wash. He sums up his observations in the following directions:

Quillaia-bark (4 parts) is macerated in water (36 parts) for several days, and the strained macerate is mixed with spirit (4 parts), and filtered. Then 40 parts of this extract are shaken, at a temperature at which wool-fat becomes liquid, with 12 parts of anhydrous lanolin. This is then increased to 300 parts with water, to which 15 per cent. of spirit has been added. Any desired addition may be used, such as cinchona-extract, Peru balsam, quinine, tincture of cantharides, bay oil, ammonium carbonate, menthol, &c.

A lanolin hair-wash of this kind has certain advantages. It does not become rancid, and the essential oil can be dispensed with as a solvent. The preparation is a yellowish-white milky fluid, with a creamy-like layer of fat on the top, which breaks up into the smallest particles on shaking.

TINCTURES OF TOXIC DRUGS: ACONITE.

M. LEON SCHMITT has commenced in the new volume of the "Journal de Pharmacie et de Chimie" a series of articles on the preparation of alcoholic tinctures of drugs on the basis of the resolutions of the International Conference

held at Brussels in September, 1902. The Conference decided that the tinctures of aconite-root, belladonna-leaves, cantharides, colchicum-seeds, digitalis-leaves, ipecacuanha, henbane-leaves, nux vomica, and strophanthus should be prepared by percolation of the drugs with 70° alcohol in the proportion of 1 part of the drug to 10 of finished tincture. M. Schmitt deals in the first article with tincture of aconite, comparing the tincture prepared upon the Conference basis with that of the Codex, which is 1 in 5 of 60° alcohol, and is made by maceration.

	Codex (1884)	By percolation
Strength	1-5 alcohol 60°	1-10 alcohol 70°
Yield	452 grams	500 grams.
Density	0.9338 at 13° C.	0.9058 at 13° C.
Dry extract in air	5.823 per cent.	2.694 per cent.
Dry extract in vacuo	6.028 per cent.	3.161 per cent.
Ash	0.195 per cent.	0.134 per cent.
Acidity	10.64 mgr. KOH	9.52 mgr. KOH
Co-efficient of water	2.9 c.c.	3.1 c.c.

Acidity is determined by mixing 10 c.c. of the tincture with 100 c.c. of water and titrating with decinormal potash, using phenolphthalein as an indicator. The results are expressed in the table in milligrams (1 c.c. $\times$ 10 KOH = 5.571 mgr.). The co-efficient of water represents the amount of water measured by a burette at the ordinary temperature, required to be added to 10 c.c. of the tincture to make it permanently turbid. This co-efficient of water is considered by M. Domergue as an element of guarantee of great value in recognising the good quality of the product. Mineral acids communicate to the tincture of aconite a very light fluorescence (apart from colour-changes due to the alkaloids). With perchloride of iron the tincture becomes a dark brownish-green, potash deepens the colour towards brown, and ammonia does not cause any reaction. The subacetate of lead gives an abundant precipitate, and corrosive sublimate a flaky white precipitate.

TABLET MAKING.

IN the course of a short paper on making compressed tablets Mr. G. B. Weidemann, in the "American Journal of Pharmacy," says the preparation of the material to be compressed is the most difficult part of the work, as each substance has its own peculiarity and requires to be treated in a different manner. The ingredients must first be very finely powdered, then granulated, dried, and lubricated. The powder is granulated by adding water, dilute alcohol, or a mixture of syrup and water. Water is preferable, as the resulting granules are firmer and less liable to disintegrate in handling. The powder is moistened until it has the consistency of dough, and is then forced through a No. 16 or No. 20 sieve and dried. For a small tablet or triturate No. 20 is better, but for larger tablets No. 16 is used. To facilitate drying a drying oven may be used, but this is not necessary, for if spread on paper in a dry place, the granules quickly dry; but if this method is employed a piece of paper should be laid over the material to keep off dust. Lubrication of the granulated material is usually managed by spraying with liquid paraffin, using 10 to 12 drops to the pound, and 2 per cent. of French chalk is added to prevent the material adhering to the dies. Mr. Weidemann, however, omits the paraffin, as he finds French chalk alone answers perfectly. To facilitate solubility a small quantity of an inert powder is added, such as a mixture of sugar of milk 5 parts, cane sugar 1 part. Many chemicals—salol, ammonium chloride, bromides, iodides, and potassium chlorate—are supplied by the manufacturers in granular form and require no further preparation. Sodium salicylate is best granulated with mucilage, and quinine sulphate requires the addition of powdered acacia 5 per cent. and cane sugar 10 per cent.

DR. G. H. R. DABBS, in experimenting with various samples of coffee, found that the keeping qualities of the infusions were distinctly influenced by bad corks. He suggests that this deleterious influence of corks on various liquids is worthy of investigation.

precious assistant, Face, are duping the credulous Sir Epicure Mammon :

SUBTLE. Look well to the register.
And let your heat still lessen by degrees,
To the aludels.
FACE (within). Yes, sir.
SUBTLE. Did you look
O' the bolt's-head yet ?
FACE (within). Which, on D, sir ?
SUBTLE. Ay ;
What's the complexion ?
FACE (within). Whitish.
SUBTLE. Infuse vinegar,
To draw his volatile substance and his tincture ;
And let the water in glass E be filtered,
And put into the gripe's egg. Lute him well ;
And leave him closed *in balneo*.
* * * * *
Out of that calx, I have won the salt of mercury
By pouring on your rectified water ?
Yes, and reverberating in athanor.

MAMMON.
SUBTLE.

Athanor, a word derived, like aludel, from the Arabic was the name of a special kind of furnace, one form of which is found in our laboratory immediately under the aludels. Its tower was fed with charcoal, which, gradually falling as that below was consumed, ensured a fairly constant heat for as many days as was required. By a little ingenuity in construction, a considerable range of temperature could be obtained, and several different operations kept going at once. In England the athanor was familiarly called "Glow Harry"—an epithet that raises an interesting question as to why the name "Harry" should be associated, as in a better-known instance, with fire.

Returning to the shelf for a moment, many things attract attention—some of them now obsolete. The two tall pieces

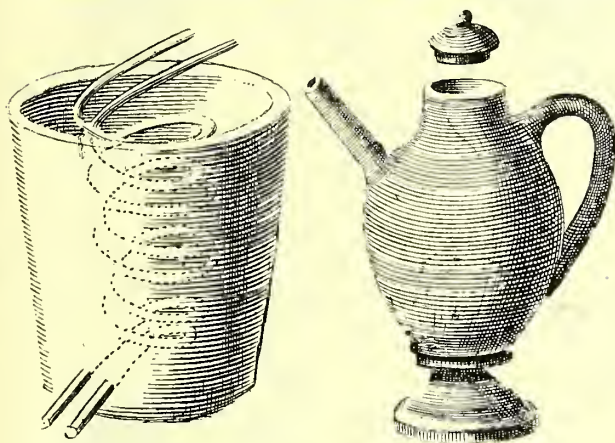


FIG. 1.—WORM CONDENSER.

FIG. 8.—SYRUP-JAR.

of apparatus (8 and 16) are, respectively, a still known as a matrass (with a "Moor's head"), and a pair of matrasses, the latter useful for digesting at high temperatures. Of similar application is the pair of cucurbits (7), while the "jumeaux" (12) were employed in "cohobation," the process of redistilling over the residuum of a former distillation. The little vessel (11) on the left of the jumeaux, that looks like a Chalk's dropping-bottle, is a Boyle's "hell," a glass jar, ending in a sealed tube, in which mercury was heated till completely oxidised. The cone over a dish (17), resembling a "dunce's cap," was used for subliming benzoin, and was known in England as a "coffin of paper." Before leaving the subject of distillation, it may be pointed out that the principle of the "worm" was already in use (fig. 1), and that, on the other hand, the mistaken affection of the ancients for the "serpent" (fig. 2 on page 184) was dying out. The latter was used especially for obtaining a strong alcohol from brandy, the idea being that the "phlegm," or watery portion, could not rise so easily as the spirit, and therefore it would be discouraged and stopped by the number of turns it had to encounter. Serpents have long had a reputation for being deceptive ; and the Encyclopædia rather cruelly remarks, in explaining the figure,

that a still with a neck a foot long would give an equally good result, but Dr. Sydney Young has in these later days shown that the turns are requisite.

Of the various operations going on in our "work-house," the most interesting, perhaps, is the preparation of a clissus (44 and 45 in the large plate). The clissus, stripped of its mystical alchemic attributes, was a solution in water of gases produced by combustion. Into the vessel over the furnace the chemist is throwing a mixture of some kind—very probably in this case consisting of antimony, nitre, and sulphur—which evolves gases that, finding their way through the series of receivers, are dissolved to some extent in the water contained in each. By the alchemists a clissus was regarded as a kind of quintessence of the substances from which it was obtained, and was credited with extraordinary virtues.

The other chemistry-plates in the Encyclopædia contain much that is curious, and some are shown on page 184. It appears that the little household Turkish baths that are to be bought for a few shillings anywhere were anticipated nearly three centuries ago. Diderot's illustration (fig. 3) is taken from Glauber, of salts fame, whose treatise, "Furui novi Philosophici," was published in 1646-49. A remarkable feature of the bath was that it was warmed by means of a copper "globe," one end of which was heated in a fire. Glauber shall speak for himself (through his English translator): "The box being well warmed, let the patient go in, and sit upon a stool, let the box be very close shut all about, and the furnace with the Copper Globe be fitted thereunto, under which let there be a small fire kindled, by help whereof the volatile spirit growing warm, goeth forth into the box like a most subtle vapour, penetrating all about the patient. But when this spirit is not sufficient to heat the box, set in it a burning lamp with spirit of wine, or some earthen pot with coales . . . that the patient take not cold, and the vapours of the spirits may the better penetrate the body of the patient." The hot copper globe was also used by Glauber for the fermentation of beer and

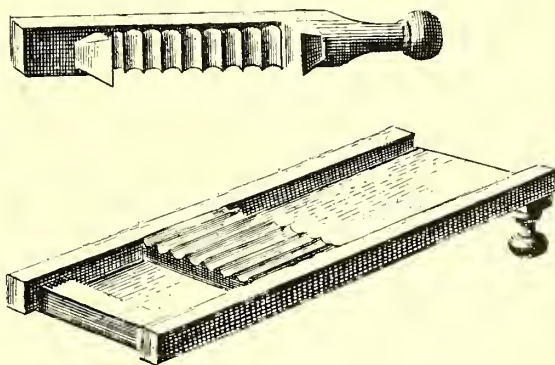


FIG. 4.—EIGHTEENTH-CENTURY PILL-MACHINE.

the slow distillation of spirits: in his view, it ensured a great saving of fuel in the "elaboratory."

A few more illustrations of pharmaceutical interest may be selected for notice. The pill-machine, it will be observed, was in use at least as early as 1763; the one before us (fig. 4) is called a "pilullier de Francfort." In the vessel (fig. 5), "pour conserver les substances volatiles," we have a hint of the modern "ether-bottle"; and both the assaying-balance (fig. 6) and the pillar-scales (fig. 7) very fairly represent their present-day successors. The syrup-jar (fig. 8) has an attraction of a different kind—that of old china. Finally, a mould for nitrate of silver (fig. 9) had just been invented by the eccentric Rouelle, the teacher of Lavoisier.

There is a tradition extant that Paracelsus always began a new course of lectures by burning in the presence of his students the medical classics of his day. True or not, the story serves to remind us that of authority, in the common sense of the word, science knows nothing; in science there is no finality.

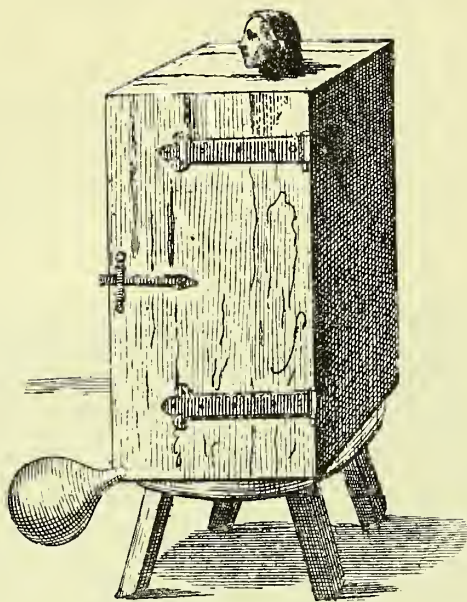


FIG. 3.—GLAUBER'S BATH

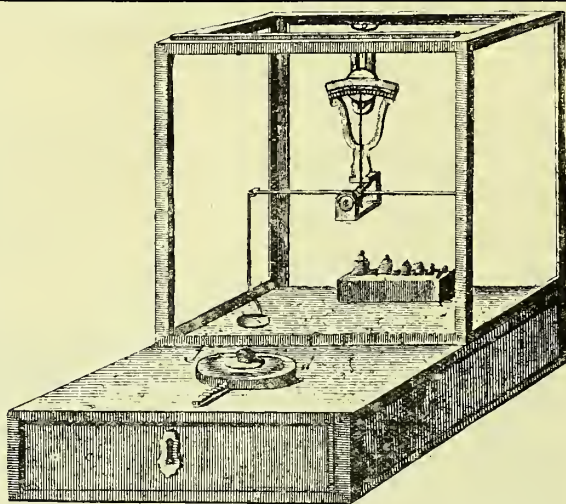


FIG. 6.—ASSAY-BALANCE.

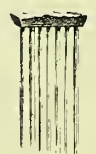
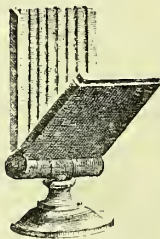


FIG. 9.—LUNAR-CAUSTI MOULD

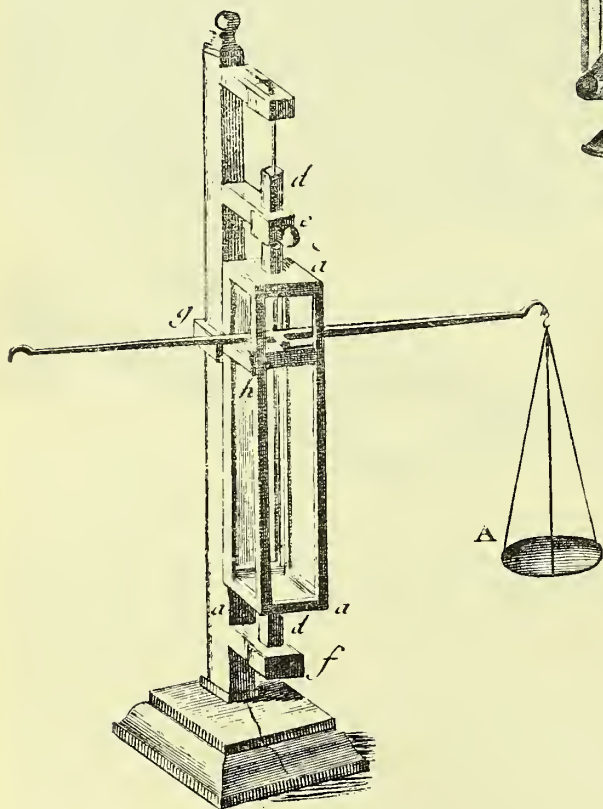


FIG 7.

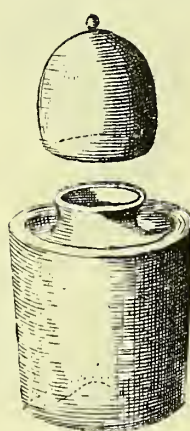


FIG. 5.

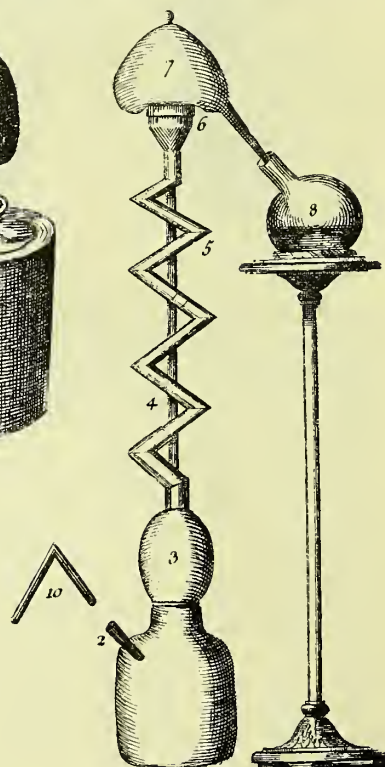


FIG. 2.—SERPENT CONDENSER.

Eighteenth
Century
Apparatus.

Papaw and Papain.

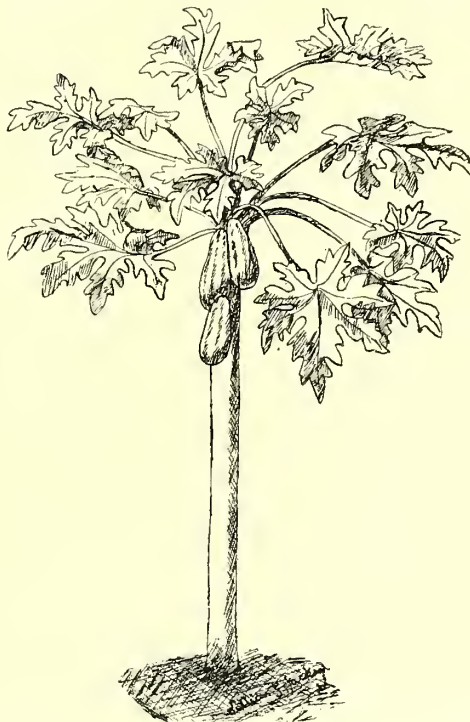
A CONSIDERABLE amount of attention has of late been paid to the papaw-tree (*Carica Papaya*), not only from its medicinal point of view, but also on account of the edible nature of the fruit. It is, however, as the source of papain that the tree has come under the notice of the Agricultural Department of the West Indies, and the following notes are gathered from references to it in the *Agricultural News*.

The fact that a small and remunerative industry in dried papaw-juice has existed for several years at Montserrat has been the cause of the revival of the interest in the subject. The trees are usually self-sown, growing among rocks on the mountain side, or else are planted around the houses of the peasantry, who collect the juice in calabashes in which a small quantity of water is first placed. To obtain the juice the rind of the fruit is lightly scored with a bone or wooden knife, or some similar instrument. As the juice falls into the water it thickens to the consistency of ice-cream, and in this state it is sold to the manufacturer at the rate of $\frac{3}{4}$ d. to 1d. per oz. A plot of 120 trees, of which about 25 per cent. are males, or non-fruited trees, was planted in May, 1902, and at the end of December 1902—a period of seven months—yielded over 10 lbs. of juice. There are two varieties under cultivation—the long and the round fruited. With regard to the respective merits of these, experience has shown that the long-fruited variety bears earlier and nearer the ground, both of which are strong points in its favour. It is, however, claimed that the round variety gives the larger quantity of juice. This may be true; but, as the latter grows to a considerable height, the cost of collecting the juice is greatly increased in the case of old trees. With regard to the quantity of juice that can be collected in a given time, it is stated that one of the student-gardeners at the station, where the trees are plentiful, collected on an average 4 oz. of juice per hour.

On the preparation of commercial papain from the fruits, the Hon. F. Watts, F.I.C., F.C.S., gives the following description of the process adopted in the West Indies, and remarks at the beginning that the preparation of crude papain is a comparatively easy matter, provided that attention is paid to certain details. In collecting the juice he observes that after a time the flow diminishes from the incision, the liquid coagulating around it, and this is carefully removed with the knife and placed in the cup with the milk. The fruit is not removed from the tree, and may be subjected to the operation of tapping several times at intervals of two or three days. It is essential that no iron knife or iron utensil should be brought in contact with the milk: wood or bone should be employed, and the milk should be collected in earthenware basins or cups, or in glass vessels—not in tins, which are sure to blacken it. After collecting, the juice soon becomes coagulated, and it should then be in the form of a snow-white curd possessing a somewhat pungent but not putrid smell. It speedily decomposes if not rapidly dried, and when decomposing it emits a most unpleasant odour; consequently, the drying should be effected as speedily as possible. When considerable quantities are being prepared the juice or milk should be collected in the early morning, and the drying should begin before midday. This ensures that by evening the material is in a sufficiently dry condition to keep without deterioration until the following morning, when the drying can be completed. This may be effected in several ways. In dry hot weather the coagulated milk may be placed in thin layers on sheets of glass and exposed to the sun. This plan, however, is rarely satisfactory on a large scale, and it is best to adopt some form of drying-apparatus. Drying is well effected by spreading the coagulated milk on drying-frames made by stretching brown linen on light wooden frames somewhat like those used for framing school slates. These frames may be of any suitable size to fit the drying-apparatus employed. A small American fruit-dryer answers very well, or a drying-stove may be constructed by building in brick a chamber about 3 feet high, 3 feet wide, and 6 feet long. These dimensions can, however, be changed to any size in accordance with the quantity of material to be dealt with.

This chamber is open at the top, and about a foot from the top it is divided horizontally into two compartments by a sheet of iron. In the lower compartment is a small fire-grate, and at the opposite end to the grate is a chimney to carry off the smoke. In order to obtain an even heat in the upper compartment it is well to spread a layer of sand one or two inches thick over the iron plate. The frames carrying the coagulated milk are placed on the top of the chamber so as to form a lid or cover to the opening, when the heat from the iron plate drives off the moisture.

It is important that the temperature at which drying is effected shall be as low as possible. Any overheating



PAPAW-TREE (*Carica Papaya*) IN FRUIT.

destroys the active principle, so that a carelessly prepared product may be useless. In practice the temperature is kept as low as is consistent with getting the substance dried before decomposition sets in. If this can be done without the temperature of the tray being raised above 100° F., so much the better. As the substance becomes dry it shrinks considerably in bulk, and the contents of several trays may be emptied into one and the drying continued.

Drying must be continued until the substance is crisp and in such a condition that it can be reduced to a fine powder without any difficulty being experienced from stickiness. The dried material should be finely pulverised, when the resulting product should be a white or cream-coloured powder, with a characteristic but not putrid smell. The powder should be packed in tins or bottles and carefully preserved from contact with the air. Grinding is easily effected in a mill of the type commonly used for grinding coffee. When grinding it is desirable to have the papain slightly warmed.

QUININE IN RINDERPEST.—Another blow to the "quinine for rinderpest" comes from India. The attention of the Government of India was attracted to the alleged cure, and Dr. Lingard, Imperial bacteriologist, was directed to make experiments to test the efficacy of the remedy. This he did on hill cattle in Kumaon, which are very susceptible to rinderpest. The result is, according to the "Pioneer of India," that he found quinine powerless to reduce temperature or mitigate the course of the symptoms. Doses varying from 60 to 120 gr. were employed, but not the least success was obtained.

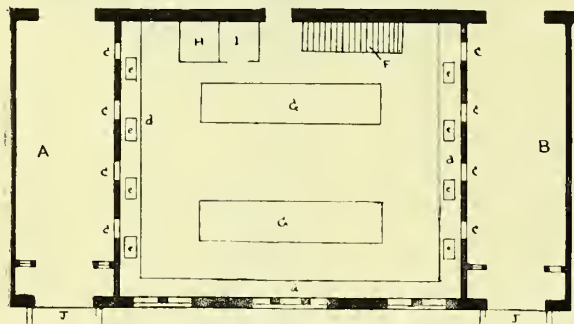
Pharmacy at the London Hospital.

By H. C. T. GARDNER, F.C.S., M.P.S.

THERE is probably not one pharmacist in a hundred who knows exactly how the pharmaceutical department of a large hospital carries out the work allotted to it. An erroneous but somewhat general impression exists that pharmacy, as practised in a hospital dispensary, is little above a mere filling of bottles from a few jars containing selected stock mixtures, and that the dispenser simply carries out an easy routine of dispensing, time after time, the same unvarying prescriptions. A brief description of the dispensaries and laboratories of the London Hospital will serve to dispel such ideas, and may prove of interest, inasmuch as perhaps this hospital has the finest dispensing department of any hospital.

There are at this institution two dispensaries, one dealing with in-patient work situated in the hospital itself, the other in the magnificent new out-patients' department, which was opened last year—a building erected at a cost of 80,000/.

The dispensary for out-patients is the larger and finer of the two, and is so placed that surgical cases passing out from the consulting and dressing rooms are attended to on one side, whilst medical cases are received on the other. The appended plan will give an idea of the arrangement.



PLAN OF THE OUT-PATIENTS' DISPENSARY.

A B, waiting lobbies: A, surgical; B, medical side. C C C, windows through which prescription-books are taken. D D D, counters with drawers beneath. E E E, sinks. F, stairs leading to laboratory. G G, stands. H, electric lift. I, telephone speaking box. J J, exit doors into street.

The fittings are of mahogany, the handles of the drawers being brass.

A great deal of thought has been expended upon the lighting: seven windows light the street side of the department, and a top light, stretching along the whole length of the dispensary, fully illuminates the waiting-hall side. The walls are constructed of white glazed bricks above, chocolate-coloured below. The floor, like that of the whole of the building, is mosaic. At night a pendant incandescent electric lamp over each dispenser's bench, with six centre lights, gives efficient illumination. The ventilation is as perfect as the lighting: the air is capable of being changed in three minutes by means of an electric exhaust fan. Each dispenser has his own set of hand-bottles containing the solutions frequently required, and the commoner tinctures, syrups, liquors, &c. These bottles are fitted with Lynch's patent dust-proof stoppers. In the centre of the dispensary are two stands having shelves above and cupboards beneath; on that nearest the window are placed a series of 4-gal. jars containing stock mixtures, infusions, liniments largely used, and lotions. Those containing liniments and poisonous lotions are kept together by themselves to minimise danger. On the other stand are the tinctures and other pharmacopœial preparations. Powders and pills are kept in the drawers beneath the dispensing counters, each pill-drawer being divided into compartments fitted with hinged lids.

The manner in which the actual dispensing is accomplished may now be outlined. Each patient on entrance into the building receives a book bearing a number and containing blank leaves, upon which the prescriptions are written. After he (or she) has been seen by the doctor, the book is

brought to the correct side of the dispensary—medical or surgical, as the case may be. It is there received at one of the eight windows by a dispenser, who makes up the prescription, afterwards stamping it to show it has been dispensed, and by whom. On an average a dispenser can deal with twenty-six to thirty-six books an hour if the prescriptions are fairly straightforward.

As soon as the stock bottle of any particular preparation is empty it is sent down by electric lift to the laboratory below, where it is filled and returned. The laboratory is commodious, and, like the dispensary, well lighted and ventilated. Along its inner wall is a row of five steam-jacketed pans, holding respectively 20, 30, 40, and 60 gal., and a small one for melting fats. It will be seen that these are put to good use if it be mentioned that every month are used, amongst other things, 272 gal. of infusion of gentian, 80 gal. infusion of orange, 60 gal. infusion of senega, and 50 gal. infusion of senna.

At the far end of the laboratory the balloon of a drug-mill arrests the eye. The mill to which it is attached is capable of disintegrating in three or four hours $\frac{1}{2}$ ton of root to a suitable size for making infusions. Motive power is supplied by an electric motor suspended from the ceiling. On looking at the photograph, perhaps the two most noticeable things are the ointment-mill and the tincture-press. The latter can press the marc from 10 gal. of tincture, that being the usual quantity of the more commonly used tinctures prepared at a time.

There are also a powder-mixing machine, a small mill for eye-ointments, an emulsifier, a suppository-machine which makes suppositories by pressing the cold suppository mass through dies of the proper size (this can be seen in the photograph, attached to the iron pillar on the right), and a plaster-spreading machine. The laboratory distils its own water, the still being placed in a recess on the right, the output varying with the steam pressure, superheated steam being the source of heat. Close by is a pot-still used for the manufacture of spt. ather. nit. It can be conceived that, at a hospital dealing with an aggregate of 169,020 out-patients and 13,364 in-patients yearly, preparations are made on the manufacturing scale. It is greatly to the credit of the Chairman (the Hon. Sydney Holland), the committee, and the untiring zeal of Mr. Morris (the present secretary and late chief dispenser), that the whole department has been effectively furnished without the least extravagance. Such, too, is the care bestowed that errors are practically unknown, although the materials dealt with run into a bill of at least 9,000/ per annum. The dispensary prepares its own malt and oil, the monthly output of this useful mixture averaging 1,540 lbs. Good use is made of the ointment-mill, before mentioned, because, in addition to the ointments required for the ordinary medical and surgical patients, there are large quantities of ointments of various kinds dispensed on the mornings in which patients suffering from skin complaints are treated. Every month are prepared and dispensed of such ointments as ung. hyd. nit. dil., 200 lbs.; ung. acid. boric., 220 lbs.; ung. glyce. plumbi sub., 120 lbs.; ung. ichthyol., 70 to 80 lbs.; and ung. sulph., 50 lbs. This is not by any means an over-estimate. Syr. ferri phosph. co. is another preparation largely used, about 140 gal. a year being made.

At one end of the laboratory is the office of the chief dispenser, fitted up as a chemical-test room. Here the eye glances on such familiar objects as a vacuum-pump with manometer attached, a fume-chamber with an evaporating-plate at the base of it, a balance, a still and condenser of the Inland Revenue pattern, and other apparatus, with, of course, shelves containing bottles of test-solutions. It is here that Mr. J. A. Jennings, the chief dispenser, labours in the cause of purity in drugs, so that the poor who flock to the hospital receive unadulterated substances.

Pills are an article that are not found on the purchase-sheet of this hospital; they are made in a department of their own, together with tablets and lozenges. A white door labelled in black letters "Pill Department" gives access to the room, situated at the entrance end of the laboratory. From here 67,000 pills, tablets, and lozenges are turned out weekly. The machinery in this department, as well as in the laboratory, was supplied by Messrs. Baker & Co., of City Road. The mass is made in an Hodgkinson kneader capable of converting, with a suitable excipient, 20 lbs. of powder into a pill-mass, which can be piped by a FINDER double-action

press. The pipes are cut into pills by another machine. Four sets of movable cutting-rollers are used, according to whether 2, 3, 4, or 5 gr. pills are desired. The rough pills are rounded in a machine between two revolving plates capable of graduation to the size of pill cut. It can round

drug or chemical can be instantly found by reference to the stock-book. The bins themselves are plainly labelled, so that on entry into the store familiar names greet one's eye, in white letters appearing all the more prominent because of the brown colour of the bins on which they are painted.

Here, on one side, is cort. aurantii, on another magnesii sulph. (a substance which is used to the extent of 3 tons yearly at the hospital), and on another sodii bicarb., and so on, until food for reflection is given on the amount of drugs and chemicals required for the alleviation of human suffering.

There are other spacious stores, of which mention alone can be made—stores for wool, lint, and the other surgical dressing used, a store for inflammable substances such as ether, stores for dispensing bottles and pots, glass apparatus, reserve stocks of galenical preparations, bales of crude drugs, drugs for the pill-room, and a room containing the soda-water plant.

From the stores to the in-patients' dispensary is some little distance, but, before concluding, something must be said about this important part of the whole department. Compact in the extreme, it is admirably adapted to the purpose for which it is required. Centrally situated, it is readily got at from all parts of the hospital. There is always some one on duty here, day and night; two dispensers in the daytime, one at night. It is nicely fitted in mahogany, and might be some select pharmacy. Nor is the character of the work done other than that performed in a first-class pharmacy; stock mixtures there are, but emulsions, pills, suppositories, mixtures, &c., other than stock are largely dispensed. Precision is the order of the day here, as it is in the out-patients' department.

The boards to which the prescription-papers are affixed, and the bottles to be refilled, are brought down to the dispensary twice a day. The prescription is written upon the label of every bottle.



[Photo by Mr. E. L. de la Rue.]

OUT-PATIENTS' DISPENSARY.

$\frac{1}{4}$ lb. of pills at a time. There is, too, a coating-machine, consisting of a large copper pan attached to a revolving arm.

Attached to the working bench is a flat iron plate heated by steam, upon which moist masses can be dried to a proper consistency. The pills themselves are dried in a drying-room, on perforated zinc shelves maintained at a temperature ranging from 90° to 100° F. There are two excellent machines for making tablets. One, a Holroyd, compresses medicaments into tablet form at the rate of 2,700 tablets per hour. The other machine makes tablets for hypodermic use such as strychnine hydrochloride $\frac{1}{60}$ gr., or morphine acetate $\frac{1}{16}$ gr., at the rate of 135 a minute. A 10-horse power motor, to which is attached Baker's patent reducing-gear, drives the machinery, the driving-wheel making 124 revolutions a minute.

At the present time about 9 lbs. of pill-mass of various kinds is worked up into pills weekly, although as much as 15 lbs. has been made in a week. The mass for the lozenges is made in the same kneader, and is spread into a paste of the right thickness between two rollers in a machine attached to the lozenge-cutter cutting 240 lozenges a minute.

The finished pills and tablets are stored in air-tight tins, distinctly labelled, ranged on shelves around the room.

Mention may be made of the fact that the department is self-contained—that is to say, the materials used for making the pills, tablets, and lozenges are bought separately and are booked separately to this department.

In connection with the dispensary are a range of store-rooms having concrete floors. The main store faces the entrance to the laboratory. Around the walls are bins for crude drugs and chemicals in bulk; above are shelves for parcels, bottles, and jars. There are also a cupboard for virulent poisons and a small chemical laboratory partitioned off.

Everything is so arranged in this store that any desired



[Photo by Mr. E. L. de la Rue.]

THE MANUFACTURING LABORATORY.

Poisons are kept in ribbed actinic green bottles so as to be distinguishable both by touch and by sight, alkaloids, their salts, and hydrocyanic acid being under lock and key in a proper cupboard. Instead of the white stock-jars used in the out-patients' dispensary, there are handsome white-glass gold-labelled jars, each holding about a gallon, placed upon a central stand.

Produce Notes.

OIL OF LEMONGRASS.

A correspondent of the "Madras Mail" calls the attention of planters to the possibility of making a profitable side-industry out of the cultivation of lemongrass (*Andropogon citratus*) which grows freely on the hills in Southern India. He thinks there is no doubt that a big industry may be established by the systematic cultivation of the grass and its collection for the purpose of distilling the oil by a more modern process than is now followed. A new pattern of still was recently constructed in Travancore and is said to work satisfactorily. At present Travancore has practically a monopoly of the Indian trade in the oil, though cultivation has recently been extended to the Cochin State.

INDIAN COTTONSEED OIL.

A recent issue of the "Agricultural Ledger" is devoted to the cottonseed-oil industry and the establishment of cottonseed-oil mills in India. Mr. James Mollinson, M.R.A.C., Inspector-General of Agriculture in India, is the author of the monograph, and he gives some interesting commercial information regarding the product. A comparison of the prices of various oil-seeds is shown, together with fluctuations, cost of freight and other charges for export of cottonseed, prices in Europe, &c. Reports are also submitted on feeding-cake, and the results of analyses are given. As regards the introduction of machinery into India for the pressing of seed, it is pointed out that the new type of British machinery is capable of dealing with Indian cottonseed as successfully as the best class of American machinery.

INDIARUBBER.

A recent issue of the "Agricultural Ledger" contains results of the examination of two rubbers and substitutes for india-rubber by Professor Wyndham R. Dunstan. The first of the two substances examined, the *Willughbeia edulis*, is not favourably reported on and is of no commercial value. The second substance, however, the *Urceola esculenta*, is said to have shown good elasticity and tenacity, and contains 76.2 per cent. of caoutchouc and 7.0 of resin. These results show that the rubber is of a very fair quality, though the amount of insoluble matter is rather high. This, however, could be remedied to a large extent by more careful collection, so as to exclude vegetable debris. A sample of the rubber has been submitted for commercial valuation to brokers, who compare it with "Tonquin" rubber worth about 2s. or 2s. 1d. per lb.

COMORO ISLANDS VANILLA.

The Barbados "Agricultural News" states that the most profitable crop in the Comoro Islands (French) is vanilla. The first plantations date back ten years, having been started at Anjouan in 1893. At present there are more than 70,000 vines in cultivation, which yield about 40,000 kilos. (about 90,000 lbs.) of vanilla annually. In Comoro vanilla can be cultivated up to a height of over 2,500 feet above sea-level. It is usually trained on "pignon d'Inde," which is forced to branch by cutting the ends when the plants are about six months old. The vanilla is planted at the foot-supports; the slips are from 20 to 40 inches long, and three or four nodes and internodes are buried in the soil. The plants yield fruit in the third year. The pollination is carried out by women and children, and the flowers which are not fertilised are removed.

BAY OIL AND BAY RUM.

The "West Indian Bulletin" contains an account of the bay-oil and bay rum industries in the West Indies, about which little information appears to have been published. The island of Dominica is one of the principal centres of the industry, and the business has proved a lucrative one. It was not known until late years from what plant bay rum was prepared, but it is now ascertained that the tree is *Pimenta acris*, one of the plants known in Jamaica as wild cinnamon. Bay rum is manufactured in a very simple manner by distillation. The leaves are picked from the trees, and then dried; in this state they are placed in the still, which is then

filled with water, and the process of distillation is carried on. The vapour is then condensed in the usual way, and forms "bay oil," a very small quantity of which is required for each puncheon of rum—say, 1½ pint of pure oil to a puncheon of rum. St. Thomas (Danish West Indies) is the headquarters of the bay-rum industry, and the alcohol used is white rum from the Danish island of Santa Cruz. The supply of bay-leaves required at St. Thomas is obtained from St. John's, Dominica, and the Virgin Islands. The latest information in regard to the bay-oil and bay-rum industry is contained in a letter dated Dominica, June 4, 1903, written by the Administrator (Mr. H. Hesketh Bell) to Dr. Morris, in the course of which he says that up to about four years ago there was a considerable export of bay-leaves from Dominica—e.g., in 1898 the exports were valued at 1,372l. Since then, however, the business has materially decreased, the exports in 1902 amounting to only 490l. The cause of the decrease is due to the fact that when Porto Rico became attached to the United States large quantities of leaves were obtained from that island, and, being free of import-duty, crowded the Dominican product out of the market. It is, however, asserted that the Porto Rico leaves are inferior to those obtainable in Dominica, and it is expected the bay-leaf trade will probably soon resume its former proportions. The best variety of bay-tree is fairly common in Dominica, and, as the inhabitants are well aware of the value of the leaves, there is no danger of the trees being wantonly destroyed. As the outcome of this letter, the Agricultural Instructor at Dominica, on the initiative of Dr. Morris, is to prepare a summary of information in regard to the distribution of the trees in the several districts, and the methods usually employed for collecting and harvesting the leaves, and suggesting what steps are desirable for encouraging the growth of the trees. The "Bulletin" article also contains an interesting account of bay-trees in Barbuda and Porto Rico. In Barbuda the trees are very limited in number, but in Porto Rico they occur in all parts of the island. It appears, however, that the leaves of the bay-tree of Porto Rico, in so far as they are the produce of "Bois d'Inde citron," are inferior to those of Dominica. It is probable that the true bay-tree (*Pimenta acris*) may be found at Porto Rico, but as the leaves of all the trees met with have "the taste and odour of lemon" they are said to be useless for the preparation of the best qualities of bay oil, and therefore also of bay rum.

At the Counter.

CUSTOMER places on the counter a stone jar (height 18 inches, capacity about ½ gal.), and says, "Sixpenn'orth of carbolic acid." She got it in a poison-bottle.

CHILD: "Please, sir, for a teething-powder." Chemist: "How old is the baby?" Child: "It's not for a baby, sir, it's to rub on the cat's hack." Chemist: "Oh! you mean Keating's powder, do you?" Child: "Yes, sir."

SMALL BOY presenting a pint bottle, and a slip of paper on which is "1d. of radium." Chemist, on reading: "Who is this for?" S. B.: "Miss P—— [young lady in local post-office] for her corns."

A BOER OF PORT ELIZABETH had some ideas about phosphorus in his head, and sent a leading firm there the following order:

DEAR SIRS,—Could you oblige me with some phosphor, small quantity only, am going out spring hair shooting and should by the phosphor be better able to the sight on the gun.

Yours faithfully,

6d. herewith.

His need was satisfied, the recipients inform us.

UTILISING THE CHEMIST.—Enter woman with two quarter-pound "screws" of paper containing two white powders, evidently not pharmaceutically put up. "Please will you tell me which of these is borax and which is carbonate of soda, as I want to make a cake and have forgot to mark them?" Obliging chemist performs some simple analysis before his visitor, and decides the knotty point. Exit inquirer with "Thank you," but without making any purchase.

Improvement in Corks.

At a recent meeting of the German cork-industry, held at Frankfort, Mr. H. Helbing, F.C.S., gave a lecture and demonstration on a new improvement in corks which he, in association with Dr. F. W. Passmore and Mr. Fortescue Wetherman, has carried out and perfected on the industrial scale. The purpose of the invention is, to put it very briefly, to rebuild the cell-walls of the cork layers, so as to restore the elasticity at one stage or other exhibited by the structure. As Mr. Helbing put it in his lecture, elasticity, resistance, freedom from odour, insolubility (and consequent freedom from taste), porosity (without allowing liquids and gases to permeate) are the principal properties which give cork its utility; they are the essential features of cork, and according to whether the product possesses these qualities to a greater or less extent the utility and applications of the cork are determined, while the defects of cork are traceable to the lack or irregular distribution of these properties.

The irregularities of cork are easily understood if one considers that the cork-bark is formed by the growth of the cork-cells, which are subjected to numerous influences, and this growth is prolonged for a number of years during which soil, seasons, changing climate, disease, parasites, and other factors make their influence felt. In cork we have a conglomeration of more or less matured, perfected, diseased, and healthy cells and structures which go to make up the material collected as faultless cork-bark.

The irregularity is the cause of the defects in corks, and deficiency in elasticity and resistance are due to weak, irregular cell-walls. Permeability by gases and liquids is occasioned by thin cell-walls and the presence of soluble bodies in the cork, to which also the so-called corky taste is solely attributable.

The process which Mr. Helbing and his colleagues have devised aims to strengthen the weak cell-walls, and so make the cork more resistant, while leaving its elasticity unaltered and rendering the soluble contents of the natural product harmless.

The process neither removes any part of the cork, nor does it modify any good property of the cork. It is quite simple in principle, and consists in first permeating the cork with casein, and then fixing it and rendering it insoluble by means of formaldehyde. The casein takes the place of degenerated cellulose—in fact, wherever the solution is absorbed an exceedingly thin but very resistant and elastic skin is formed which covers the cell-walls, cork-dust, and soluble substances, and this action increases with the size of the cells and with the porosity of the cork. The cork itself regulates the quantity of casein necessary for its improvement, and by its selective action controls the building-up of weak parts, this resulting in cork of uniform resisting-power. It is the whole cork, and not merely the surface, that is improved. This is demonstrated when a treated cork is submitted to pressure in a Salleron apparatus, and it is found that a treated cork, although previously brittle or spongy, has all the spring which is needed in one of the best champagne-corks.

The process of treatment is termed "Korkit." We have had the opportunity of inspecting and testing the "Korkit" corks, which do not differ in appearance from the corks before treatment. Apart from the improvement in elasticity, the most notable feature about them is their comparative resistance to acids and alkalis. If an ordinary cork is put into a 1-per-cent. solution of caustic soda, within a few seconds it will be noticed that tiny brown streams begin to flow towards the bottom of the solution. These are due to the alkali dissolving the tissue, especially the cellular *débris* invariably present in the pores of the cork. "Korkit" cork similarly placed is not acted upon at all until some hours have elapsed. As the "Korkit" process is substantially a sterilisation one, it follows that the corks cannot set up secondary fermentation, as air-borne yeast-cells are devitalised by the process.

Wine-merchants in this country and in France and Germany are making extensive trials of "Korkit," and the reports so far indicate that the inventors have solved a problem which has of recent years been a pressing one.

Medical Gleanings.

SEAWEED AS AN ANTISYPHILITIC.

In a paper recently communicated to the Eastern Siberian Medical Association Dr. Kirilloff dealt with the virtues of seaweed as a diet in syphilis. It is widely used as a food in Japan, and, as it contains combined iodine, the disease, which assumed such alarming characteristics in other countries, runs a comparatively mild course in Japan.

ARISTOCHIN IN WHOOPING-COUGH.

DR. HERMANN KITTEL, writing to "Therap. Monatsheft," gives particulars of the treatment of whooping-cough with aristochin, a new remedy manufactured by a German firm. This substance, according to Arends' "Neue Arzneimittel und Specialitäten," is the neutral carbonic ester of quinine, a white tasteless powder practically insoluble in water. Kittel gives particulars of eight juvenile cases of whooping-cough in which he gave aristochin in doses of $\frac{1}{2}$ to 3 gr. thrice daily, and in from ten days to four weeks the paroxysms of coughing were reduced from one or more every hour to nil. He has treated many other cases with equally good results, and in many of them bromoform had already failed.

WHOOPING-COUGH LINIMENT.

A MEDICAL writer recommends the use of equal parts of turpentine and olive oil in preference to other liniments in whooping-cough. The liniment is to be rubbed on the chest night and morning until redness is produced.

FOR PRURITUS OF THE SCROTUM.

Hydrarg. bichlorid. ...	...	...	gr. viij.
Alcohol. ...	...	...	5vj.
Aq. anthemidis ...	...	...	5vj.
Chloroformi ...	...	...	gtt. v.
Aq. camphoræ ad ...	...	...	5ij.

Fiat lotio.

—Medical Times.

ANTISEPTIC TREATMENT OF BOILS AND CARBUNCLES.

THE following formulæ for the modern treatment of boils and carbuncles were given in a recent number of the "Medical Times."

Chloroformi ...	...	...	3j.
Ol. caryoph. ...	...	...	℥lxxxv.-5v.
Creosoti ...	...	...	℥lxxv.-xxx.
Lin. camph. ...	...	...	3ij.

Misce.

For external use only.

Hydrargyri salicylat. ...	...	...	gr. ij.-v.
Acid. salicylic. ...	...	...	gr. xv.-xxx.
Spt. vini rect. ...	...	...	3ss.-j.
Aq. dest. ad ...	...	...	3iv.

Misce.

For external use only.

The affected part is covered with compresses saturated with either of the above solutions. At the same time, one or other of the following solutions is injected into the boil or carbuncle:

Acid. carbolic. ...	...	...	gr. j.-ij.
Sodii salicylat. ...	...	...	gr. xv.
Pulv. boracis ...	...	...	gr. xv.
Glycerini ...	...	...	℥lxxx.
Aq. chloroformi ...	...	...	5ij.

M.S.A.

Iodoformi ...	...	...	gr. v.-viij.
Saloli ...	...	...	gr. viij.-xv.
Acid. carbolic. ...	...	...	gr. iss.
Ætheris ...	...	...	5ss.-j.
Spt. vini rect. ...	...	...	5iss.-ij.

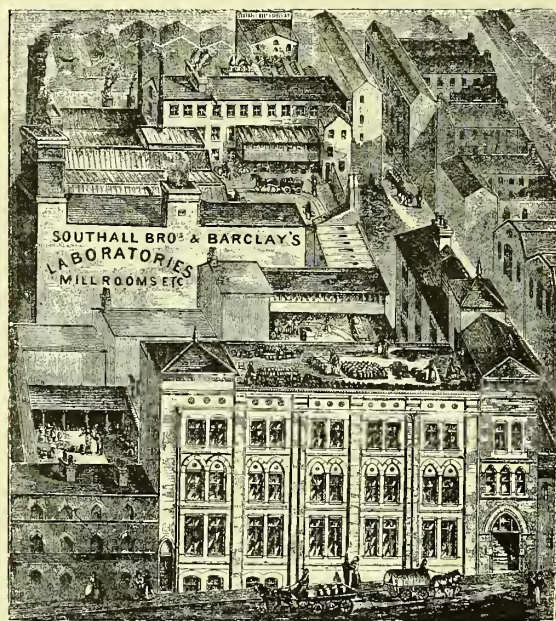
M.S.A.

This treatment is said to give excellent results, and to do away with the necessity for a more radical surgical intervention even in cases of carbuncle.

Midland Manufacturers.

Visit to Messrs. Southall Brothers & Barclay's Warehouses.

IT is one of the privileges that come with years to be able to go back on our records for a phrase or a statement which may serve to give point in any matter of present importance. So, after a visit to the extended premises of



AS IN 1885.

Messrs. Southall Brothers & Barclay (Limited), Birmingham, we naturally turned to our issue for January, 1885, and there found a wood-engraving, which looks quaint in these days of photographic processes, but was, nevertheless, costly in comparison. We reproduce this engraving on a reduced scale, and beside it place another which more accurately represents the premises as they were a year ago; while a third and larger engraving shows what they are now.

In the front of the pictures we have Lower Priory, the hilly street which descends from Corporation Street—a modern instance of civic venture which was made during the mayoralty of Mr. Joseph Chamberlain. The 1885 picture shows what was then a new building of three storeys. The second engraving shows that since then this building advanced upwards, one floor having been added to it in 1895. At the

corner of the picture to the right there is a low, old-fashioned looking house which dated back to coaching-days. It was an inn, called "The Waterloo," and a fine place it was at one time; but when the lease fell in, a few years ago, the city authorities, for various reasons, considered it advisable to let it lapse. Thereupon Mr. Thomas Barclay, chairman of the board of directors of Messrs. Southall Brothers &



AS IN 1895.

Barclay (Limited), was approached in regard to the addition of the site to their block of buildings. The matter was not arranged in a day—indeed, Mr. Barclay's Battle of "Waterloo" is an interesting local episode—and after the public-house stood empty for two years his company obtained possession and commenced building-operations. We have the result in the third picture, showing the completed frontage, Lower Priory to the left, Dalton Street to the right, in the distance Bull Street, and a square is completed by Dale End. It looks a miniature town when one gets on the flat roof and surveys the scene, for since Mr. Thomas Southall in 1820 left John Bell & Co.'s, in Oxford Street, W., to start in Birmingham, he and his successors added house by house to the original premises until altogether they look as shown in the third picture. Accretion of this kind is not, as a rule, favourable to methodical

internal arrangement, but this is an exception. Mr. Thomas Barclay has not been in the house since 1861 without knowing in what directions the business has been developing, and his central ideas of departmental progress, rapidity of despatch, and specialising in new directions have dominated each fresh addition to the premises. Thus the exterior view from the roof is the converse of the interior uniformity.

It is unnecessary to attempt a geographical descrip-



THE PREMISES AS THEY ARE TO-DAY.

tion of the interior, but it may be said that on entering from Lower Priory one finds the town department at the top of the stair. A glass partition separates it from the invoice-department, quick communication between the two departments being considered essential. But perhaps a more striking feature of the town department is the means provided for quickly conveying orders to each of the warehouses, this being an anticipation of the pneumatic-tube cash system, which was devised long ago by the company. This carries the written orders to the part desired, and the warehouseman's tympanum is tingled by an electric bell until he attends to the order. Small lifts and large, besides an ingenious trolley system, serve to convey the goods to the waiting messengers. Behind the invoicing-office Mr. A. William Southall has his private room, and the buyers of the house have a large and well-lighted room beside it. Retracing

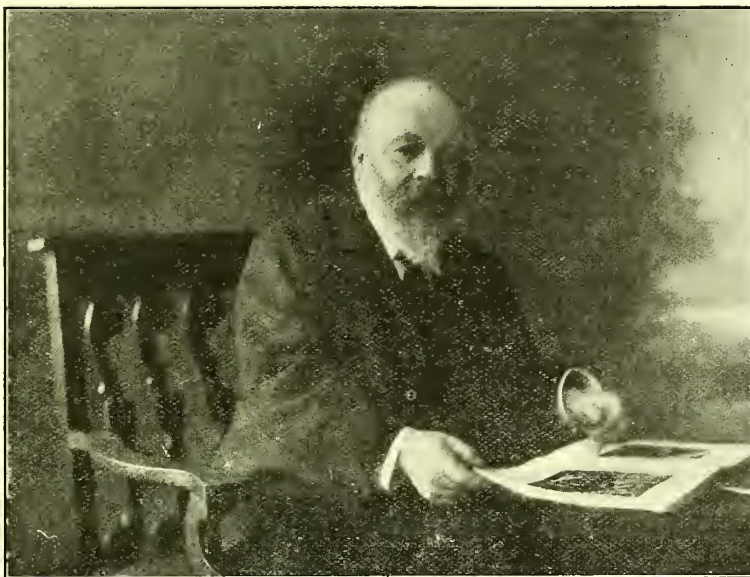
our steps to the head of the staircase, we pass the company's cod-liver oil exhibit from the last Paris Exposition, and enter a spacious showroom in which a sample of everything manufactured by the firm is kept, besides specimens of all sundries and other goods. There is also a completely fitted-up chemist's shop, including the fixtures for three sides, a dispensing-counter, window-enclosure, bottles, pots, &c. Shopfitting is a strong line at Lower Priory. Next to the showroom is the board-room, in which Mr. Barclay spends most of his time, and off it a neatly furnished private room, as well as a secretarial office. The board-room looks on Dalton Street. These are all in the new premises, which also contain on the ground-floor a spacious general or ledger office, splendidly lighted, and close by are a strong-room for books and business papers, a sponge-room, and an Excise warehouse, the latter being devoted solely to the packing of tinctures and other alcoholic preparations for export under drawback. This warehouse is fitted according to the official requirements, so that when the Excise officers visit the warehouse weekly to supervise the despatch of Colonial orders, they may get through the work of inspection with the least possible delay. The extension has also enabled the company to bring together in one spacious floor all the packing for the home trade, which was formerly done in three distinct apartments.

"That's all the new; now we come to the old," said Mr. Thomas Barclay, after we had gone so far in the work of exploration; yet the old territory showed change almost every yard we went, except in respect to *personnel*, for to our question, "How long have you been here?" we heard such replies as "Fourteen years," "Eighteen years," "Thirty-two years," and so on. Every now and then Mr. Barclay would say, "He's a Major man," so it transpired before the finish of the inspection that wherever pharmacy, in the strict sense of the term, is concerned, there the company endeavours to place a pharmacist with the highest qualification. We tapped the "wets" (an expanded department), and here a bright-looking Ph.C. stepped forward to explain the system of stockkeeping whereby every ounce of tincture is accounted for and obsolete stocks are prevented. It was the same story in every department; each has a competent man, working the part under his supervision as if it were the soul

of the business, and the explanation is that he knows his principals have perfect confidence in his ability to do the work as well as it can be done.

Another characteristic of the establishment, and one that we have not seen elsewhere, is the "tube" railways which have been made to relieve the surface-traffic within the works.

There has always been a miniature tramway on the premises, and the recent extension gave the opportunity of carrying some of the surface-traffic underground; so a tunnel has been dug between the foundations of the buildings, and rails are laid there which enable consignments from the various laboratories to be carried down to the warehouses on the Lower Priory level without congesting the two hydraulic lifts. Contiguous to this tunnel cellars have been excavated in which bottles and the like are stored as they come from the makers. Near by also is a stone staircase, which is



MR. THOMAS BARCLAY, J.P., PHARMACEUTICAL CHEMIST.

the artery of the premises, as there is a way to it from all parts, and in the event of fire or any other disaster, employes have merely to seek this staircase in order to reach safety.

In succession we walked through a standard tincture-laboratory, a spirit-store, steam-laboratory, the chemical-manufacturing laboratories, and grinding-rooms; then we touched a department which the extension has provided. This is a floor formerly devoted to pill-making, but now used solely for what for convenience we may call "small galenicals"—a sort of wholesale dispensing-department. It is situated under the eye of the company's analyst, Mr. E. W. Mann, Ph.C., F.C.S., and in it are compounded special preparations and the most delicate or toxic of pharmaceuticals. Pill making and coating are now conducted on a more spacious floor, with a pharmacist to supervise the doings of the workers (mostly women). Contiguous to it is a new department (designed by the late Mr. John Barclay) solely devoted to the manufacture of compressed tablets, perles, and gelatin capsules; and another, close by, is fitted with emulsifying-machinery. This looked like a butcher's shop when we were there, as the workmen in their overalls were busy preparing pancreas for some preparation.

After shaking hands with Mr. Mann in the private and research laboratories, where half-a-dozen workers are engaged in examining goods as they are received and standardising or testing the company's own products, we passed through a section of the premises where an astonishingly complete printing-plant is installed. Here every variety of machine printing is done, from the firm's labels and handbills in plain black ink to the most artistic three-colour half-tone productions and accurately "keyed" colour-and-gold cartons and labels. Close to this, with an entrance from Lower Priory, is a bicycle-room where employes can store their bicycles during working-hours.

Returning to the main warehouse, Mr. Barclay showed us the counter-speciality factory, which the extension has expanded considerably. Throughout the specialities are stored in cabinets, figured and indexed, so that anyone new to the department can lay his hands on the oddest thing without delay. Close to this is an extra "dry" room well stocked with original packages of drugs. We now began to see more clearly what the extension of the premises, and the relega-

tion of the surgical departments to separate buildings, has meant to the organisation of the strictly pharmaceutical establishment. The extensive floor, hitherto filled with whirling sewing-machines, is now comparatively silent, being occupied by workers packing chemists' specialities. Other floors are also devoted to the packing of these goods and also to pharmaceutical products, and in succession we inspected floors in which girls were weighing and folding scidlitz powders or the like, another "drys" in tin and bottle, and a third "wets" in all forms, ready for the retailer handing over to the public. Here the signs of increased business, compared with what we had to record in 1885 or even later, were very manifest, for during the years which have intervened, Messrs. Southall Brothers & Barclay have been keeping pace, and even leading the trade into new directions which mean economy and effectiveness.

And so the inspection continued through numerous departments until we reached the export-packing floor, and from there went for a moment to the aerated-water factory—an essential part of the business, one of whose latest productions is "Matinal," an aerated aperient mineral water in syphons, devised by Mr. Thomas Barclay, jun., to meet the needs of those who should "take it early."

We had in the course of an afternoon inspected a very complete pharmaceutical establishment on the large scale, every operation covered by the British Pharmacopœia being represented, and others besides; for they included the requirements of the surgeon and many domestic needs which official medicine does not cover. We had seen the efforts of the six or seven hundred men and women on the company's pay-sheet brought into systematic order for ready distribution to customers at home and abroad; and when we got back to the board-room Mr. Barclay resumed his chair in the natural position shown in the reproduced photograph. He has now as his co-directors and immediate helpers (Mr. Alfred Southall having practically retired) Mr. A. William Southall, Mr. W. F. Southall, Mr. Wilfred Southall, and Mr. T. Barclay, jun.—the last-named supervising the production of the surgical dressings and sanitary dressings associated with the house. As we said in 1885, so may we say now, Mr. Thomas Barclay, sen., "looks after the working of the business," which means a great deal. He has willing co-directors and many devoted heads of departments. Mr. Barclay is an old pupil of Mr. John Mawson, and was in Newcastle in those days when Brady and Proctor strove to make provincial pharmaceutical education a reality. Mr. Barclay took with him from Newcastle Orr's "Circle of the Sciences" as evidence of what he had done as a class pupil of those ardent disciples of pharmaceutical education. As a young man he was introduced to Southall, Son & Dymond by Mr. Mawson, who, when visiting Mr. Harvey, of Leeds, learnt that the Birmingham firm wanted a traveller, and hearing from Mr. Harvey of young Barclay's keenness in seeking orders, thought he was the man for the place. He got it, and a few years later a partnership in the house. The work he did then has so multiplied that seventeen travellers are now required to cover it. Meanwhile he has been at the helm of the ship, and has found time in his leisure (apart from civic and philanthropic work) to do excellent service for the drug-trade in founding the Chemists' and Druggists' Trade Association of Great Britain, which only ceased when it had accomplished the work for which it started—viz., defence of actions under the Sale of Food and Drugs Acts, the Apothecaries Act, and completion of an understanding with Somerset House as to the administration of the Medicine-stamp Acts as they were understood in the eighties.

This rapid sketch of the Lower Priory premises by no means exhausts the developments in the business which have recently taken place, its purpose being merely to show how these developments have enabled the company to secure greater working-space for the more strictly pharmaceutical part of the business.

The area planted in Para rubber in Ceylon is estimated at 3,000 acres. The best results have been secured in the South Kaltum district, where the soil is mostly a sandy loam. Each tree produces about 1 lb. but the quality of the rubber is often impaired by the use of such acids as lemon-juice to hasten the extraction of the juices from the trees.—*Deutsche Kolonialzeitung*.

Pharmacy on the Equator.

By A. E. BERTIE-SMITH.

IN perhaps no part of the Empire to-day is pharmacy less represented than it is in the Protectorates of British East Africa and Uganda. Though both of these States have an immense commercial future before them, and are destined to be very "bright jewels" in the British Crown, we have yet no single British pharmacist in business for himself. At Mombasa, the capital of British East Africa, there is, however, a Goanese who was originally an assistant or compounder in an English pharmacy (Messrs. Beynon & Co.'s) at Bombay. He is our sole trading representative. Nevertheless, there are a few pharmacists spread over some thousands of miles of country—from Goudokoro on the Nile (that Sir Samuel Baker made famous) to Ambarara in Ankole; and from Entebbe, the capital of Uganda on Lake Victoria, to Mombasa, on the Indian Ocean. These men are fairly representative chemists, doing good work, in the employ of the Government, as medical assistants or dispensers in the interests of civilisation and humanity. Mr. Westray is at Goudokoro, Mr. Buckland is at Ambarara, Messrs. Bargery and Bertie-Smith are at Entebbe, and Mr. Whitton is at Mombasa. Mr. Bargery, who is senior,



MR. J. E. BARGERY, MEDICAL STOREKEEPER AT ENTebbe.

Returned to camp with the head of a cobus cob.

has been out in Uganda three years as medical storekeeper, and is now home for a well-earned six months' holiday. He is very popular with all the Europeans of the Uganda capital, from H.M. Commissioner downwards. He is the last of the first five men originally engaged for the Protectorate. They were Messrs. Wilson, Bargery, Arnold, Westray, and Taubman; and all had to spend many months marching up before the railway was finished. One of these men lost his life, dying from fever at Kosumo on Lake Victoria on his way to the coast. Messrs. Taubman and Wilson have both been invalided home from blackwater fever—the most fatal of all diseases to Europeans in this country—or malaria. All came down from the Nile province from Wadelai, Nimule, and Goudokoro, which have an evil reputation, as a small minority of the doctors or chemists sent there can stand the climate. All the other provinces are comparatively healthy, Ambarara and Entebbe having most exceptionally beautiful climates, and if care be taken in both eating and drinking they are quite healthy.

To men of middle age it will seem but a little time ago that Stanley made England tingle with excitement at his wonderful discoveries in this part of the world—his exploration of the great Lake Victoria, 125 miles broad, and 200 miles long; the mountains of the moon; the pigmies; his hundred fights with cannibals and naked peoples; and his famous letter to the "Daily Telegraph" sent from Kampala, recommending England to send its missionaries to the finest of African negro races, the Baganda, which letter

was stained with the life-blood of the European officer who carried it through the Nile province towards Khartoum. Now we have the great railway, which cost 6,000,000*l.*, to the great lake; two steamers to cross it, and a splendid administration of capable Englishmen and Scotchmen, civilising and administering a great and beautiful country with their usual tact and fame. The opposition to the grant for the construction of this railway would probably have prevented millions of happy subjects of the King from seeing the light of civilisation, and possibly have caused the death of thousands by the slave-trade or disease, whilst it would certainly have lost a province to the Empire. The Protectorates do not yet pay their way, but they are rapidly approaching a state when they will yield an actual profit to the British exchequer, to become a smaller edition of India, and another example of the glory of British rule amongst coloured peoples.

That the botany of the Protectorate is exceptionally magnificent those who have read Sir H. Johnston's great work on Uganda, published last year, will admit. But the materia medica is yet to be described, and I hope from time to time to record what little can be learnt on the subject with the help of the one or two capable botanists interested in medicine now in the service of the Government.

The education of the people of Hindostan led to the



AN EQUATOR DISPENSARY.

ENTEBBE HOSPITAL DISPENSARY.

On the right is Mr. Bargery, chief medical storekeeper; Mr. A. E. Bertie-Smith, dispenser and acting medical storekeeper, is behind the dispensing-counter; and alongside him is Mr. Fazul Khan, hospital assistant and dispenser.

introduction of many valuable vegetable drugs into medicine. The people of East Central Africa, without learning and steeped in superstition, simply killed their old men and women when they became infirm or ill. Whole races were destroyed by the slave-traders or internecine wars, and those that were left have apparently grown up without a knowledge of the use of the plants surrounding them. The very name for medicine, "dowar," is an imported Indian word. The medicine-man, who is slowly disappearing, is a sorcerer, not a man with a considerable knowledge of vegetable therapeutics, such as most of the Indian hakims possess. The country, nevertheless, teems with a useful economic flora, and the experiments being made in the Botanic Gardens at Entebbe confirm the surmise that Uganda is capable of growing a vast number of the more important economic plants useful in medicine.

Amongst other economic plants growing freely either wild or in the gardens I have seen the following: *Ricinus communis*, *Datura Stramonium*, *Gossypium herbaceum*, *Hematoxylum Campechianum*, *Linum usitatissimum*, two or three *Andropogons*, *Glycyrrhiza glabra*, *Arachis hypogaea*, *Nicotiana Tabacum*, species of *Eucalyptus* and *Aloe*, *Bixa Orellana* (annatto), *Pimenta officinalis*, and *Cannabis indica*.

The duties of the dispenser or medical assistant are curious and varied. He is called upon to dispense, prescribe, act as hospital dresser, nurse, and perform minor operations.

Frequently he is left in entire medical charge of a station for many months together through the absence of the doctor. He is badly paid for the work he is called upon to perform, and runs, as I have said, considerable risk to his life at some stations. But there are some compensating advantages. If he likes to pay 10*l.* for a licence he has the chance of killing big game. It is doubtful if in any other part of H.M. dominions that the chemist has that opportunity. Amongst other game Mr. Taubman, I believe, got two elephants at much profit to himself, as well as hippopotami. Mr. Bargery got a zebra and a hippo. Antelopes have fallen to everyone's guns, being required for the pot. Of course, only male animals are allowed to be shot, and then not more than two in any one year. If so inclined, in the larger stations, the dispenser has time for tennis, cricket, or football; and if he is a man of education and refinement his acquaintance will be sought after.

There is no particular opening for a chemist and druggist in either Protectorate, because the Government is philanthropic, in that all natives are treated free of cost at the dispensaries or hospitals or by the missionaries. If this were not the case, the natives are as yet too poor to be able to pay for medicine. Many are horribly diseased, venereal complaints and dirt-diseases being extremely common. Phthisis is entirely absent; but its place is more than well filled by small-pox and sleeping sickness. The latter is always fatal, no remedy having yet been found for it.

THE TESTING OF PEPSIN.

IN the course of a paper ("Journ. de Phar. et de Chim.," December 15, 1903) on "The Variations of the Action of Pepsin on Fibrin, in the presence of acid, at a temperature of 50° C.," the author, M. Disdier, says that we have known for a long time that the soluble ferments are destroyed when they are subjected to a relatively high temperature. If in a perfectly dry condition they can bear for some time a temperature of 100° to 120° C. without their digestive properties being in any degree modified, but in an aqueous solution the destructive action of heat is very pronounced, Harlay having noticed that at 60° C. solutions of pepsin lose some of their activity, while the ferment is totally destroyed at 68° C. These weakening temperatures also vary with the presence of foreign products in the solution, Mayer having observed that with a proportion of fuming hydrochloric acid equal to 6 c.c. per litre, the destructive temperature ranges between 55° and 60°. The first change that takes place in the digestion of albuminoids is syntonisation (the formation of syntonin or acid albumen), caused by the hydrochloric acid which is always present in physiological solutions. Syntonisation requires a certain time, and it is interesting to know at what moment the pepsin ought to be added in order that it may undergo the minimum of alteration from the combined action of hydrochloric acid and heat. M. Disdier's first object was to determine the most favourable moment for the addition of the pepsin for the digestion of fibrin in the presence of hydrochloric acid, and for this purpose he carried out a series of experiments which are detailed in the paper. The result of these is that, if pepsin be added to an acid solution at 50° C., it undergoes a diminution of activity according to the length of time the ferment and acid are in contact—that is to say, the more prolonged the contact the weaker becomes the ferment. It is therefore best to add the pepsin and the fibrin together to the acid liquid when this has reached the desired temperature: in this way the minimum of albumose and the maximum of peptone are obtained.

The author next determines what strength of acid gives the most satisfactory result. The normal acidity of the gastric juice corresponds to a proportion of 0.15 per cent. of hydrochloric acid, and M. Disdier finds that for experimental purposes this strength is also the best, weaker solutions, 0.125 per cent. and under, and stronger solutions, 0.2 per cent. and over, alike taking longer time for complete digestion to be effected. The author finally made some experiments with acids other than hydrochloric, and he finds that digestion takes place in the order named—hydrobromic acid 0.3 per cent., nitric acid 0.25 per cent., and sulphuric acid 0.2 per cent. The organic acids, lactic, oxalic, and formic, gave results different from the mineral acids.

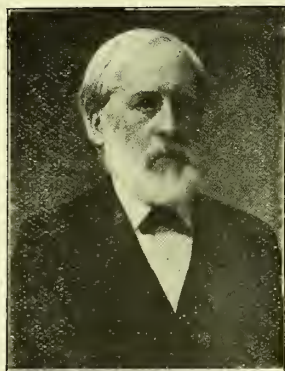
Old Memories.

By JOSEPH INCE.

[The publication of Mr. Ince's latest work, "Elementary Dispensing Practice," suggested to us some account of his career, and the following interesting narrative is the outcome of our inquiry.—EDITOR C. & D.]

MY father, the late William Ince, had definite views respecting travel as a means of education; hence, before the advent of excursions, his son went to many English places of resort and was familiar with life abroad; passports were a source of much vexation, and a lumbering diligence conveyed dust-covered passengers from one foreign town to another.

Not that home-training was found of much use, if any, in the acquirement of a foreign tongue, for I was sent to the



MR. JOSEPH INCE, A.K.C., ETC.

1833, Member of the Pharmaceutical Council; 1837-73, on the Board of Examiners; Lecturer in Pharmacy, fourteen years dating from October, 1833; Fellow of various learned Societies; editor of "Science Papers" by Daniel Hanbury; a author of "Latin Grammar of Pharmacy" and "Elementary Dispensing Practice."

strictly classical school of King's College, in the Strand, where I learnt Greek and Latin, and shared the conviction prevalent at that date that the boy who gained the writing or the French prize had forfeited the esteem of his companions.

Wonderful changes have taken place in that respect during the past few years; we are nearing the Swiss system, and in time may emulate Sweden. The monotonous study of the rules of grammar, long strings of exceptions, exercises, and the reading of classic continental authors do not lead to satisfactory results.

Having passed through all the classes of the school, in due course came promotion to the general literature and science department of the college, where I remained two years [1843-1844], and three years afterwards became an Associate [June 30, 1847]. Though a non-medical student, I attended the lectures of Professor Daniell on chemistry, and subsequently those of Professor Miller, his successor in the chair. It was fortunate for the college to have so eminent a man as Daniell for a professor; as fortunate was the appointment of F. D. Maurice to the chair of English history and literature. His influence was felt by every student with whom he came into personal contact, and remains as an abiding memory with those who still survive.

From college-life and its associations I was transplanted to the historic house of Ambrose Godfrey, in Southampton Street, Covent Garden. Of pharmacy the new recruit knew absolutely nothing, being unable to distinguish the commonest drugs; while dispensing, the chief occupation of the firm, was to him wisdom at one entrance quite shut out. This, in spite of his having been legally apprenticed for seven years to Mr. Richard Hotham Pigeon, citizen and

merchant taylor. Having to perform one act of servitude at the end of the allotted period, I was set to wrap up $\frac{1}{2}$ lb. of light magnesia, which liberally adorned the counter during the attempt, to the no small joy of the onlookers. Then my father did a most wise thing—he sent his son to Paris: first for three months to learn French in a private family, and afterwards, when fairly able to converse, to have rooms in the Quartier Latin and to follow whatever courses might be advantageous either at the School of Pharmacy in the Rue d'Arbalète, the School of Medicine in the street of the same name, at the Sorbonne, or any special college where a celebrity such as Michelet or Quinet might be heard. All the lectures were free, and it was usual for a stranger (that is, other than a French student) not to confine himself to any course in particular.

It was a sensation for a home-bred youth to be plunged suddenly into that strange new life. Modern civilisation and Baron Hausmann have effectually obliterated everything characteristic of the old Quartier Latin. Gone are the narrow streets and rickety wooden bridges, the huge model of the elephant described by Victor Hugo, the open stream of water gurgling down the Rue St. Jacques; and vanished also is the night-watchman, who used conscientiously to hoist his oil lantern on a pole (*poteau*) under the impression that such illumination would aid in lighting up the neighbourhood. The *chambre garnie* was in the Rue Lacuée, close by the Pont d'Austerlitz. Bitterly cold was the weather—an Arctic winter—yet an admirer of the picturesque could scarcely hope to see a fairer sight than old Paris in the snow.

L'École de Pharmacie was an unpretentious building, and as an educational centre was not specially attractive. Guibourt—a name well known to English pharmacists—lectured on materia medica, his course being fairly well attended. He was an acknowledged authority in his own department, and the author of many valuable works. His quick method of speech and the too rapid survey of his accumulated specimens were against him as a lecturer. Eugène Soubeiran, Jean Baptiste Chevallier, and Antoine Alexandre Bussy—all three men of the first rank—discoursed on their respective subjects. For botany, students went to Achille Richard at the School of Medicine. Still, though better exponents of pharmaceuticals could not be desired, it must be confessed that an enthusiastic following on the students' part was not conspicuous in the Rue d'Arbalète. Sharp was the contrast at the École de Médecine, where Orfila, the famous toxicologist, was giving the winter course of chemistry. The cold might be called Siberian, as the snow fell in pitiless flakes on the mass of students waiting outside in the great quadrangle for the well-known signal, "Quand vous voudrez." Then the two entrances to the vast theatre were thrown open: a rush was made over the benches, down, pell-mell downwards, to gain the front row, and in less than five minutes every seat was filled. There was betting at the Café de la Rotonde—the students' *café*, now a Duval—as to how often the first row had been gained. When no more could be accommodated, the friendly students would help one another up to a coign of vantage in the window-seats, where little bands of five or six were perched aloft. The amphitheatre was said to hold about a thousand persons; the new building seats 1,400. The library contained about 30,000 volumes, access to the lectures, library, and museums being entirely free.

Orfila had a handsome presence, and his voice was naturally so good that tradition ran that he had been originally destined for the opera. No notes or memoranda of any kind were used by him, nor, indeed, by any other lecturer. The lecture-table was crowded with chemicals, preparations, and apparatus; two demonstrators were kept hard at work during the hour assisting in the performance of various illustrative experiments. Orfila's method, after preliminary considerations relating to general chemical laws and processes, was to treat of a non-metallic body—for instance oxygen—describing its different combinations to form oxides, acids, and salts. Hydrogen followed, treated in the same manner, and so on throughout the series. The metallic bodies were then reached, each being invariably treated under five heads: (1) History, (2) characteristics, (3) essential property, (4) combinations, with (5) method of production. Needless to say that the section relating to antimony and arsenic

(taken as one subject) excited unusual interest. Several lectures were devoted to the chemistry of both and to the toxicological value of certain reactions; the absolute importance of precautions to be taken in judging of results; the whole illustrated by the incidents of the trial of Mme. Lafarge, which were circumstantially detailed. Orfila became a great favourite of the students, owing to his intervention on their behalf when they had come in contact with the authorities by a too fervent demonstration in favour of the Poles. A student-rising in Paris is not a thing to be trifled with; a batch of sympathisers were temporarily put under arrest, but were released at Orfila's request. A storm of applause greeted his next morning's appearance in the theatre, and right through that session he was the idol of his youthful audience.

Jean Baptiste Dumas, *orateur et savant*, gave an advanced course of chemistry at the Sorbonne. His was a somewhat different audience, the two front rows in the amphitheatre being occupied by the *Sœurs de Charité* and other religious orders and ecclesiastics. Nothing was more remarkable than the dissimilarity between these two foremost exponents of the same science. Orfila, the type of the popular, in the best sense of the word, buoyant in manner and spirited in delivery; Dumas, with his polished sentences, faultless in construction and enunciation. Both were acknowledged leaders in their day, and both largely contributed to the reputation for brilliant exposition which Paris then enjoyed.

The time came when "Mr. the Englishman" had to leave his student's quarters, a small room with a red-brick floor and huge porcelain stove, and regretfully to bid adieu to the gay city and its attractions. Returning home, the wanderer was entered as a student at Bloomsbury Square. Pereira was at the height of his powers and in the full tide of his popularity. Gifted with an enviable constitution and physique, he may be said to have revolutionised the method of teaching *materia medica*. His subject-matter was intensely interesting, and was rendered more so by his admirable delivery. The dry bones lived.

The establishment of the laboratory as an educational necessity marked an era in British pharmacy. For the first time, in London certainly, an opportunity was offered to the general body of apprentices and assistants to gain some practical knowledge of the art by which they might hope eventually to get a living. Hitherto the chances were that a youth might have the good fortune to be placed under a master, worthy of all honour, who himself was the teacher of those whose services he employed, and whose actual business became the best and most efficient mode of training. The chance was rare; so rare that the fact remains that then, for the first time, advantages limited to a few were thrown open unreservedly to all.

Having finished the course of instruction at the Square, once more a place was offered in the firm of Messrs. Godfrey & Cooke, the historic house which has been so frequently described. For two years the junior assistant was not allowed to touch dispensing, so by way of consolation he attended the course of anatomy by Professor Partridge, and physiology under Todd and Bowman. Godfrey's was the type of old-world pharmacy: the counter-drawers were deep and cumbrous, about a dozen patent medicines formed the stock, and were seldom asked for, except perhaps Locock's wafers, Singleton's ointment, and Cockle's pills. Advertisement was looked down upon with horror as something beneath the dignity of the establishment, and any attempt at alphabetical arrangement was thought superfluous. Dire was the indignation of the old laboratory man, when, during his temporary absence, a sign-painter was engaged to label several stock tins and bottles which for years had remained without that aid to recognition. It was the duty of the junior to make a row of fresh infusions every morning, the only concentrations being *infusum gentiane compositum* (1 in 4) and *infusum rosæ compositum*, double strength. The assistants and two porters dusted the shelves and cleaned the bottles every Saturday, the head-dispenser taking his share; to the junior was committed the task of refilling—a long and laborious occupation.

Certain exclusive rights belonged to the head-dispenser. To him was entrusted filling and arranging medicine-chests, then an important branch of the trade; any suggestion of help would have been resented as an interference, and he claimed a monopoly in spreading plasters. Quick means of

transit have seriously interfered with the former industry, and plaster-spreading by hand may be classed among things obsolete. Each assistant had his own little set of customers who came to him in preference, and each had his list of "repeats" which he did his best to clear before the active business of the day began. The old firm was not a place in which to learn general trade, for it was essentially a dispensing house. The amount of physic prescribed and taken was amazing. Whole families dosed themselves or were dosed throughout the year with remarkable regularity. Homœopathy, no doubt, had its share in bringing about a change; the revival of commonsense did more; granular effervescing-preparations have proved fatal to drastic purgatives, and the black draught has materially disappeared; while drops—that is, mixtures in a concentrated form—have supplanted draughts. Long hours of business were accepted as being in the necessary order of things, as well as a fortnight's holiday every second year.

How the venerable Ambrose, "famous chymist, London," would wonder at the transmutation which six and fifty years have wrought! Store-prices have replaced professional charges; the Lowther Arcade has closed its gallery, owing to the too keen competition in druggists' sundries and fancy goods, but fortunately photography, an utterly legitimate development, has come forward to the rescue.

1851 was the date of the great Exhibition, during which year my father was President of the Pharmaceutical Society. On his death, two years afterwards, his son became sole director of the ancient laboratory in which Boyle pursued his chemical investigations. Carmine and ammonia preparations were the chief commercial articles; while the huge worm and still, the spring-beam pestle, the heavy wooden-screw press—in time supplemented by the hydraulic—the naphtha-heated silver evaporating-pan, and a respectable collection of snakes and adders preserved in spirit, to the last maintained the mediæval traditions of the past.

Late one Wednesday afternoon [1853] Mr. Jacob Bell drove up to Southampton Street in order to fetch the late French student to join the "Journal" Committee at Langham Place. There had been no previous notice or arrangement of any kind whatever, and that was the introduction to a friendship which lasted to the lamented death of the founder of the Society. The "Pharmaceutical Journal" was then the private property of the editor, and was issued once a month. Mr. Bell wrote the leading articles and historical statements illustrating the progress of pharmacy. His happiest work was "The Concise Historical Sketch" [1843], which may rank as literature with Dr. Paris's "Introduction to the Pharmacologia" [1822]. Mr. Redwood was responsible for the selection of papers having scientific interest; Mr. John Barnard was the indefatigable collector of general information; Daniel Hanbury and the present writer made up the quintet, who were left a free hand to contribute whatever pleased them best. They sent their communications direct to the printing-office at Beaufort Buildings, where they corrected their own proofs. The hand-printing presses (for steam machinery had not been introduced) were at the very top of the premises, whence could be perceived a row of coal-barges moored on the mud-banks, which have now been transformed into the gardens of the Embankment. It was below in the office (to repeat an old story) that Birtles, the head-clerk, was found pacing up and down. "See here, sir! Mr. Hanbury has sent in a lot of Chinese, and I don't know which way up to print it!" "Toss, and try heads or tails" was suggested. "Well, yes; but Mr. Hanbury is rather particular." A very pleasant time it was with Jacob Bell: high tea and journalism, both cultivated in a room hung round with paintings, which were afterwards presented to the nation. Morson and Landseer were often present, but otherwise the committee was undisturbed.

The "Journal" Committee laid no claim to omniscience, which occasionally was as well, for now and then they were unable on the spur of the moment to solve difficulties which needed elucidation. One evening Mr. Redwood produced an emetic antimony cup with an engraved German inscription, of which the first three lines were

Dubistein
Wunder
Der-Natur.

What could this remarkable stone be? No one round the table knew, but the sub-editor took it home, and in next month's "Journal" (vol. xviii., page 16) revealed the secret by the simple process of printing—

Du bist ein wunder der natur
(Thou art a wonder of nature)—

a most obvious rendering, which also proves the old adage true,

Nemo omnibus horis sapit
(No one is wise at all times).

My own papers related to foreign pharmacy, beginning with the Paris Codex of 1837, notices of German and Prussian pharmacy, extracts from Austrian pharmacy, Raspail and Mialhe. Amongst general subjects were the biography of Ambrose Godfrey, and several papers bearing on study and the social aspects of the druggist's life. Some of these latter were too fervid in expression, and were the utterances of a young man not altogether in harmony with his surroundings.

On the death of Mr. Bell (June 12, 1859) Professor Bentley became a member of the "Journal" staff, and Professor Redwood was editor-in-chief, aided by a committee of which the President, Mr. Sandford, was *ex-officio* chairman.

In April, 1863, appeared a full *résumé* by the writer of Orfila's lectures on the arsenic question in relation to the trial of Mme. Lafarge, in part reported *verbatim*. The papers on acclimatisation were founded on the collected reports of the Jardin d'Acclimatation, the whole of the published transactions having been placed at the writer's disposal by the family of Geoffroy St. Hilaire. The tourist who would escape from the glare and turmoil of Paris could scarcely do better than linger for a while in this sequestered garden.

An inaugural meeting of the British Pharmaceutical Conference was held at Newcastle-on-Tyne in 1863. The double object of the organisation was to promote friendly union amongst its members and the cultivation of the art and science of pharmacy. In both aims it was successful. The very nature of the druggist's business favoured isolation—a term synonymous with want of general interest and consequent slow progress. A new and welcome sight it was to see pharmacists from all parts for once brought together—London and the provinces united. Pleasant was it to see Henry Deane, of Clapham, on familiar terms with his youthful associates; as also at a later date (1876) to see the veteran Redwood grown young again and thoroughly enjoying his position in the presidential chair. A reference to the later volumes of the "Year-book," published under the direction of the Conference, will show how singularly representative its Presidents have been, and beyond doubt decentralisation was an unmixed good.

At the Nottingham meeting (1866) the writer gave his paper on "Pharmaceutical Ethics," which was successful and originated much discussion. At Oxford the communication on "The Nomenclature of Official Remedies" shared the fate of others of similar intent, being accepted rather as proof of individual scholarship than as having any practical bearing on the official latinity of pharmacy. No novelty was advocated, but only the systematic adoption of known rules in grammar to meet new requirements. It was contended that words of a certain termination should follow ordinary rules of declension. Thus, if we say *sapo*, *saponis*, why should we leave *kino* indeclinable, and not say *tinctura kinonis*?

Due credit must be paid to the Chemists' Assistants' Association for preparing the way towards a better understanding between the younger members of the fraternity. Theirs was a bold stroke for union and interchange of ideas, social or scientific. Beginning quietly, and with great simplicity, the Association rose into an important organisation, though with varying fortunes, and was of essential service not only in promoting the intelligent pursuit of pharmacy, but in breaking up that strange reserve which seemed to characterise its followers. Never was the writer more congenially employed than on those occasions when he read his papers on practical and dispensing pharmacy before an essentially student audience. Emulsions formed the subject in 1884, pills followed in 1885, *misturæ et lotiones* in 1887, the *Nychthemeron* process in 1889, while the Phar-

macy of the Minor Syllabus (1892), and hints on the preparation of British and foreign syrups (1896) were amongst later communications. Alas! for classical lore. Elaborate arrangements were made for a discourse on the preliminary study of Latin; the room was hung round with diagrams which literally hid the walls; the President and Secretary were present to welcome the lecturer, who brought with him a friend, and, after long waiting, there appeared an audience of one to listen to the words of wisdom.

A strange-looking figure in spectacles, and with journalist's note-book on his knee, sat as a listener at the Nottingham Conference. It was John Cargill Brough of pleasant memory. No one was likely to forget him who had seen him once, still less to forget the charm of his manner and conversation—Charles Lamb turned chemist. At that time he was the editor of THE CHEMIST AND DRUGGIST, and as soon as the Conference was ended and the visitors had gone home, he sent a long detailed account of his journal and of the method of its production to the writer, requesting him to become an active contributor. The literary fellowship thus begun lasted without interruption until the lamented death of Mr. Brough, that excellent *Littérateur* and most fascinating companion. The same personal and literary fellowship was continued when Mr. A. C. Wootton succeeded to the editorial chair, and —

AN OLD SHEFFIELD CHEMIST.

THE late Mr. Robert Thickett, whose death we recorded on January 9, had been an invalid for twenty years, and retired from business some fifteen years ago. He served his apprenticeship with his uncle, Mr. Sibray, at Longton, Staffs (who died recently at the advanced age of ninety years), and went to Sheffield to manage a shop then started in Glossop Road for Mr. Wreakes, which is now occupied by Mr. J. S. Burnell. Mr. Thickett in 1863 started business at the corner of Lansdowne Road (now Mr. Lowe's), and remained there for seventeen years, during which time he took an active part in matters affecting the drug-trade, and was a member of the local Chemists' Association. He had a large country trade, and acquired a considerable prescribing connection. He was one of the first to introduce petroleum into the town, and did a large trade in oil with the large works in his neighbourhood. Mr. Thickett used to say that the immense amount of stock he disposed of was a matter of constant surprise to the travellers, and it was his proud boast that he had at times



stock to the value of 100%. in his windows—no small feat in those days in a shop in an outlying district. Having sold out to Mr. Scott, he opened a business in Doncaster. This, however, proved unsuccessful, and Mr. Thickett left to try his fortunes in America. After a sojourn of about eighteen months there, he returned to Sheffield and started a business again in Fawcett Street, which he afterwards transferred to Gleadless Road, Heeley, but he was compelled by continued ill-health to give up altogether about fifteen years ago, and lived a life of almost continual suffering until his death. Mr. Thickett has left a widow and several grown-up children.

SLIGHTLY MINED.—Old Lady (to a dilapidated fiddler): "My poor man, where did you learn that hymn-tune?" Melodious Mike: "You see, lady, I used to play the amonia in church, but I 'ad to give it up, 'cos I lost me breath, and now I play the vinolia."—*The Tatler*.

Antique Bell-metal Mortars.

By DANIEL DAVISON, Pharmaceutical Chemist.

SINCE my last article on this subject appeared in THE CHEMIST AND DRUGGIST I have been rather fortunate in being able to add some interesting specimens to my already large collection, and the Editor has been good enough to accept this further contribution from me on the subject. A punning friend of mine writes to me as "Old Mortarility," and says I am a "pestle-ent fellow." I hope the readers of this journal will not be bored by the frequency of my articles on the subject of antique mortars, and consider me really what my friend jocularly terms me, a pestilent fellow.

It may not be without interest for me to state that I have been able to acquire the collection of mortars belonging to Mrs. Newhook, which were described and illustrated by Mr. T. Pitt, F.C.S., in THE CHEMIST AND DRUGGIST of July 25, 1903. This collection and subsequent additions bring the total of my mortars up to forty. I think this must be the largest collection of bell-metal mortars in the possession of any private collector, and I question if any museum possesses as many.

My previous articles in THE CHEMIST AND DRUGGIST attracted some little attention, and came under the notice of some of the members of the sub-committee appointed by the Royal Commission to organise exhibits of chemical and pharmaceutical interest for the St. Louis Exhibition. Dr. Boverton Redwood is Chairman of this committee, and at his desire Mr. Thomas Tyrer, a member of the committee, wrote and asked if I would lend my collection of mortars to the committee, for exhibition at the St. Louis Exhibition, as bearing somewhat upon the historic and craftsmanship side of pharmacy. I was very pleased to be able to accede to the request, and have despatched thirty-seven mortars, all I then possessed, and they will, I trust, safely cross the Atlantic and be duly exhibited in America.

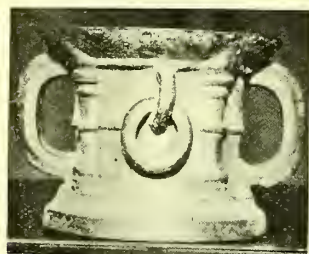


Fig. 1.

Fig. 1 illustrates quite the most interesting specimen in my whole collection. I am not at all sure that this can be described as a mortar. I am much inclined to the belief that it is an old ecclesiastical vessel: its history, so far as is known, certainly points to that conclusion. It was discovered on November 15, 1872, being dug up in the gravel-bed which was then being opened out on the site of Barnewell Priory, Cambridgeshire. It was found about 5 feet below the surface of the ground in the top soil, not the gravel, in a place where the earth dips down into the gravel, near the old Abbey church, some of the ruins of which were then standing. The gravel-pit was worked up to the very foundations of these old walls. Wm. Linsey, the foreman on the work, used to take the fresh-water shells and other fossil remains found in this gravel-bed to a gentleman who was then at Cambridge reading for his degree, and to him he also took this old vessel. It remained in this gentleman's possession until I purchased it, and I had direct from him the particulars as to the finding of the bronze.

Barnewell Priory, of Austin Canons, was built in 1112 by Pagan Peverell, standard-bearer to Robert, Duke of Normandy. It took its name from a well, frequented by young persons on St. John's Eve for athletic sports. The minster was dedicated to St. Andrew and St. Giles.

In the inventory taken at the dissolution of this Priory in the year 1539 occur the following entries, either of which might reasonably apply to this old bronze vessel:

Hereafter foloweth all suche parcelles of implements or household stufte ornaments of the church and suche otherlike found within late monastery at tyme of dissolution thereof.

The Cloyster. . . j lytell ould laver of brasse, j laver of laye mettell whyche as yette remaneth.

The Vestrye. . . j holywater stoke of brasse.

In explanation of above, it is well known that in old records the term "brasse" covered all vessels of copper and bronze as well as what we now term brass. It is not improbable, therefore, that this old bronze vessel may have been the "littel ould laver of brasse." I cannot find information as to "laye mettell," and should be very interested if some archaeological reader could enlighten me.

The fact that these lavars are noted as yet remaining after the other goods were sold and dispersed is some evidence as to my bronze vessel being one of those mentioned, as it was found on the site of the Priory.

"Stoke" was a stationary vessel for holy water placed at the entrance of churches, probably chained to a pillar or stone; hence its name. The rings on the handles of this old vessel might suggest that it had been thus chained. Its appearance in every way points to its antiquity. An expert authority on old bronze considers this to be of thirteenth century. It is in perfect condition, without a flaw: its two massive handles, with the heavy bronze rings, are quite unique. The decoration is distinctly ecclesiastical, and the shape is unlike that of any mortar I know; it is 6 inches high, $7\frac{1}{2}$ across the top, and it weighs $27\frac{1}{4}$ lbs. Be it mortar laver or holy-water vessel I know not, but the place of its discovery and the inventory particulars are strong evidence as to its being an old Priory vessel.

Figs. 2 and 2A illustrate a very handsome English mortar.



Fig. 2.

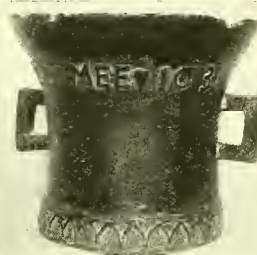


Fig. 2A.

The spelling of the inscription running round the mortar below the rim is very quaint:

HENRYE NEALL . MADE MEE . 1631.

The words are separated by a heart. The initials A S on the waist of the mortar probably refer to the owner. The decoration in relief round the base is of an unusual character. The mortar weighs $11\frac{3}{4}$ lbs.

Fig. 3 is an illustration of the smallest and largest mortars I possess. The large one and that on the left (the

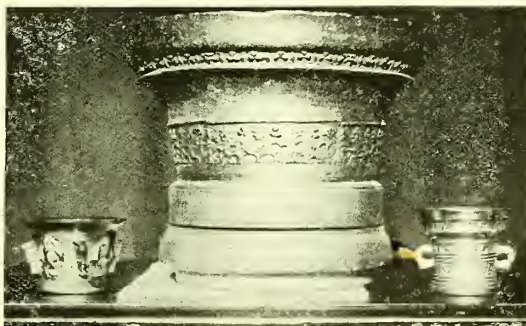


Fig. 3.

Dutch mortar) have been before described. The smallest one is that with protecting wings of the Spanish type. This mortar I obtained from a dealer in Windermere, having been very kindly informed of it by Mr. Bousfield, of Hull, to whom I am duly grateful. It was described to me as having been found during the excavation of Preston Docks. It is

probably Spanish or French. The wings are distinctly Spanish; the face is of a Sphinx-like character. It is but $3\frac{1}{2}$ inches high and $4\frac{1}{2}$ inches diameter, weighing $2\frac{1}{4}$ lbs.

Fig. 4 is a very fine example of an English mortar with rose-and-crown decoration. This Tudor badge is often found on mortars of a later date than the Tudor period, but I believe this mortar to be an early specimen. It is quite small, being $3\frac{1}{4}$ inches high, $4\frac{1}{2}$ inches across top, and weighing $2\frac{1}{2}$ lbs. The shape is somewhat unusual in that the base has a flattened and projecting edge. The metal is beautifully smooth and bright, and is in excellent condition.

Fig. 5 shows a mortar of a rather Eastern type, the acorn and the seated figure clad in what seems to be a turban and cloak being quite new to me. It was described to me as Egyptian, and of fifteenth century. I cannot confirm or question this. It is evidently old, and is of a metal rather more substantial than is usual



FIG. 4.



FIG. 5

in Oriental mortars; the decorations are a little worn from cleaning, but otherwise the mortar is in fine condition.

Fig. 6 is an illustration of a mortar possessing the Tudor crowned rose and having a date considerably later than this decoration would suggest—viz., 1664. This is a pleasing



FIG. 7

example of an English mortar. It is very striking how few these dated English mortars are compared with continental examples, and one is correspondingly delighted to secure them as specimens. It is very necessary to be chary in buying Dutch mortars, as modern replicas of the antique are not uncommon.

Figs. 7, 8, 9, 10, 11, and 11A are mortars belonging to a friend, Mr. A. Savin, an antiquarian and geologist, of Cromer, who has kindly allowed me to photograph and describe them.

Fig. 7 is a very good example of a Dutch mortar: it has the decoration and fish-like handles, but has no inscription.

Fig. 8 is an English mortar, and is almost identical in size, shape, and style with fig. 6, but it has a different decoration. I should consider this dates from seventeenth century.

Fig. 9 is a mortar with rose and crown; it is not such a good specimen as fig. 4.

Fig. 10 is an early mortar, with no date or inscription, but with orthodox band and rim ornamentation.

Figs. 11 and 11A illustrate quite the smallest mortar I have



FIG. 8.



FIG. 9

FIG. 10.

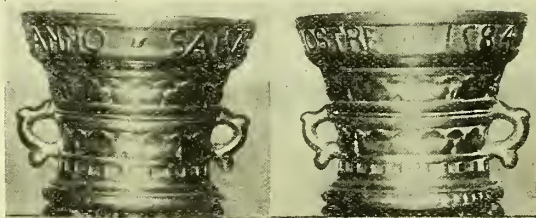


FIG. 11A.

FIG. 11.

ever seen; it is but little more than a toy. It is only 3 inches in diameter, $2\frac{1}{2}$ inches high, and weighs but 18 oz.



FIG. 12.

It is of Dutch make, with usual handles and decoration. and the following inscription: "Anno Salutis Nostre, 1684." The figure 7 is reversed. I have not had an opportunity of

refreshing my mind historically, to see to what possible event this inscription applies; it may be simply another method of alluding to Anno Domini. I should be glad of information from a more expert brother.

Fig. 12 is a group of antiques, from which readers may pick out something that will interest them.

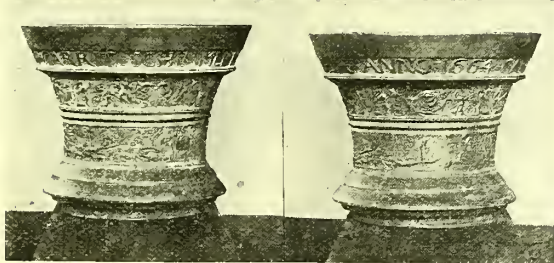
I should like to take this opportunity of thanking those readers of *THE CHEMIST AND DRUGGIST* who have been good enough to write me information on this subject. I am always very glad to hear of mortars, and more still for information on the archaeological side of the subject. It is not without its fascination, and unfolds a nearly-forgotten page in the history of pharmacy.

Cromer, January 18, 1904.

ANOTHER OLD MORTAR.

By LEONARD DOBBIN, Ph.D.

THE interest aroused in the subject of old mortars by the appearance in *THE CHEMIST AND DRUGGIST* of several well-illustrated articles respecting these attractive relics of an almost bygone era in pharmacy led the writer to have brought forth to light of day a very good specimen of an old



English mortar which belongs to the Professor of Chemistry in the University of Edinburgh. The history of this specimen is unknown, except that it came into the hands of the present owner from his predecessor in the Chair of Chemistry—the late Lord Playfair, then Sir Lyon Playfair. The mortar, which is of bronze, is $9\frac{3}{4}$ inches in height and $12\frac{1}{4}$ inches across at the top, and it weighs 63 lbs. It bears the inscription—

Garrit Schimmel me fecit. Daventryae, Anno 1664.

The accompanying illustrations give a good idea of its proportions. The pestle is missing.

A PEEP INTO THE FUTURE.

I PICKED up the other day, in the office of Professor Prognostics, the handbill of a circus that will show in Manhattan on July 4, 1950. The bill was very small, and the type was altogether too fine to read. Indeed, the professor told me that a microscope came with it, and it was only by the aid of that instrument that I could copy the following random extracts:

"Fortypaw's Encyclopedic Microbic Menagerie and Bacillar Biograph! A stupendous aggregation of beautiful and baneful bacteria! Eight bacillidromes under one sheet of glass! First exhibition in Manhattan of the golf-germ, hootmon brassensis! Novel demonstration of the swellhead microbe, *biggi egotisticus*! Beautiful ballet by the banner bacteria, *bluestockinga Bostonia*! "N.b.—Each spectator will be supplied with one of the new Fortypaw telescopic microscopes, magnifying three million diameters. By means of these wonderful instruments the minute microcosms will be rendered distinctly visible."

"Signor Daredevil, the master of the Monads, will convert himself into a cage for a colony of cholera microbes, which, by means of Fortypaw's omnipenetrative X-ray apparatus, will become apparent in his stomach, held under control solely by Signor Daredevil's psychological intensity."

"Gladiatorial combat between the world-renowned mosquito, Yellowfever Transferer and Signor Theophilus Thickskin, armed with no other weapon than a bottle of kerosene."

"Observe that all lemonade sold in this circus is sterilised, all programmes are fumigated, and each patron receives a hypodermic injection of Fortypaw's universal immunising serum."

AMOS R. WELLS, in *Judge's Quarterly*.

A Midland Pharmacy.

IN the town of Leominster, rich with historic memories, stands the pharmacy represented here. A peculiar interest is attached to it in view of the fact that to-day we describe the most recent developments of the business in Birmingham which was founded by men—Thomas and William Southall—who were born in the house attached to the shop. When Thomas Southall started in Birmingham his brother William was carrying on business in this shop, and after Thomas had turned the stiff corner in the Midland capital, and the business became too much for one to handle, he got his brother to remove from Leominster to help him. They kept in touch with the Leominster pharmacy; indeed, the Southall family is to-day still one of the most respected in Leominster. As the Birmingham staff grew, first Mr. Thomas Barclay, then Mr. Michael John Ellwood, were brought from Mawson's, in Newcastle-on-Tyne, to assist in the work. Mr. Ellwood had been apprenticed for five years, in 1857, to Mr. Mawson. Those were the days of living profit; and when "positive collodion" was all the go many a 10 gal. of Mawson's positive collodion did Mr. Ellwood help to make. Mr. Barclay was then the senior apprentice, and



Mr. Ellwood was third. He remembers Mr. Swan's experiments when working out his well-known "carbon process" in photography; also his night-and-day work in perfecting the electric light. He was managing Mawson & Swan's business when the dreadful explosion of nitro-glycerin on the Town Moor killed Mr. Mawson, the kindest of masters. It was market-day at Newcastle, and at first, when the cans of explosive compounds were found, Mr. Ellwood was deputed to go with the Corporation officials to see to their destruction. Mr. Mawson, however, took Mr. Ellwood's place.

When Mr. Ellwood joined the Birmingham staff he held a position in the laboratory under Mr. Alfred Southall. While there the firm gave him the opportunity of acquiring the Leominster business, and he has carried it on since the seventies, latterly in partnership with his son, Mr. William Mark Ellwood.

Mr. Ellwood is one of our oldest contributors. Thus in the *C. & D.* of January 15, 1869, will be found "a few remarks on the fallacious results attendant on the use of spoons for measurement of medicinal doses," by M. J. Ellwood. He gave the measurements of old and modern spoons, and we cannot resist repeating a few of the details:

Teaspoons varied in capacity from 50 to 150 minims. Silver spoons of 1760, 1790, and 1800, held just 60 minims; electro spoons of 1845 held 80 minims, of 1850 95 and 110 minims; and common teaspoons 65 to 150 minims. Old silver dessertspoons held 3 drams and modern ones $2\frac{1}{2}$ to 4 drams. Mr. Ellwood had to go back to 1690 in order to get a tablespoon which held the theoretical 4 drams, and since then they have jumped up as far as 7 drams. He found that wineglasses held from 12 to 19 drams. Mr. Ellwood's remarks bore fruit, and they influenced a distinguished Newcastle *confrère* to bring out the well-known Proctor measure.

Percentage-solutions.

THE fundamental principle of percentage-solutions is not always understood by dispensers. We may illustrate it with magnesium sulphate solution. If we weigh separately four single ounces of the sulphate and place each of them in four graduated glasses marked

A	B	C	D
1 oz.	1 oz.	1 oz.	1 oz.

and add respectively the following quantities of water:

3 oz.	6 oz.	6½ oz.	7 oz.
-------	-------	--------	-------

the solutions obtained will weigh respectively,

4 oz.	7 oz.	7½ oz.	8 oz.
-------	-------	--------	-------

and they will measure respectively,

3iiss.	3viiss.	3vij.	3viiss.
--------	---------	-------	---------

If these solutions were sent to an analyst he would report that they had the following composition:

	A	B	C	D	
Sulphate of magnesium	25	14.3	13.3	12.5	parts per 100
Water	75	85.7	86.7	87.5	" "
	100	100	100	100	

He would describe the strength of solution A. as 25 per cent. (or 1 in 4), and of solution D as 12½ per cent. (or 1 in 8); and so he would say that the strength of solution D was half that of solution A (weight for weight).

The analyst estimates all quantities by weight; but in dispensing it is not convenient (or at least not usual in this country) to weigh fluids. We therefore set aside the mathematical methods of chemical analysis, and adopt in their place a convention by which the quantities of solids are determined by weight and of fluids by measure. Accordingly, the strength of the solution A would be described as 1 in 3½, and of solution C as 1 in 7. These descriptions imply that 1 oz. (=437½ gr.) of salts by weight is contained in 3iiss. of solution A or in 3vij. of solution C, by measure, the strength of solution C being therefore half that of solution A (measure for measure). Any volume of a strong solution (e.g. 1 in 3½) may be diluted to ½, ⅓, ¼, &c. of its original strength by making it up with water to twice, three times, four times, &c., its original volume; and the system of nomenclature (1 in 7, 1 in 10½, 1 in 14, &c.), will still hold good.

In some hospital pharmacopœias the strengths of solutions are described as 1 to 3, 1 to 6, &c., instead of 1 in 3½, 1 in 6½, &c. This description is quite accurate so far as that particular quantity of solution is concerned, but it is liable to cause confusion and inaccuracy if a strong solution so described is used for preparing weaker solutions. For it will be seen from the examples that the strength of solution A (1 to 3) is neither by weight nor by volume twice that of solution B (1 to 6). Therefore the rule should be observed of expressing the strength of a solution as the proportion of the solid to the amount of solution containing it (e.g. 1 in 3½), not to the amount of water added (e.g. 1 to 3); and, conversely, in making a solution of strength 1 in 3½, 1 in 7, &c., 1 oz. of the solid must be weighed out, and sufficient water added to make up 3iiss., 3vij., &c., as the case may be.

In the case of solutions used in small quantities a fresh difficulty arises. For whereas 3j. of water weighs 1 oz. and contains 480 minims, it contains only 437½ gr. Let us suppose that 1 oz. of nitrate of silver has been made up to 5 pints (=100 oz.) of solution. This resembles the official 1 per cent. (or 1 in 100) solution of the British Pharmacopœia, but 100 dr. contain not 1 dr. but only 54.7 gr., and 1 gr. would be contained not in 100 minims but in 110 minims. It is thus seen that a solution prepared for use in large quantities, and containing 1 oz. in 100 oz. is about 9 per cent. weaker than a solution containing 1 dr. in 100 dr., or 1 gr. in 100m. This is not likely to prove a serious matter to the patient, but it is of great consequence to the dispenser to know (in the case of expensive drugs) whether a quantity of solution is to cost 10s. or 9s. 1d. A solution which is made so that 1 gr. is contained in 100m.

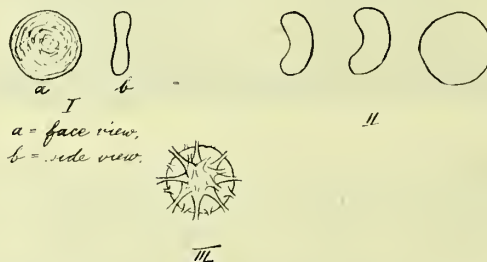
should not be called a 1-per-cent. solution, but its designation may be written thus: $\frac{1 \text{ gr.}}{100 \text{ m.}}$ The principles should be observed with regard to solutions containing more than one solid, or solvents other than water.

Isotonic Solutions.

By W. A. KNIGHT.

"NORMAL" saline, or normal salt solution, is now frequently prescribed as a vehicle for nasal douches and other local applications for the nose and throat, as well as for washing away foreign bodies from wounds, &c. To the analyst a "normal" solution of sodium chloride means one containing a molecular weight in grams of sodium chloride in a litre—i.e., a 5.807-per-cent. solution; to the physiologist, however, normal saline means a solution of salt possessing the same osmotic pressure as the liquid of living tissues, and is prepared by dissolving 0.6 to 0.7 gram of sodium chloride in 100 c.c. of water. A solution of this strength inhibits to a great extent the transference of water from the tissue-cells to the solution, and thus prevents any great alteration in the normal environment of the cells. This isotonic solution will evidently be an ideal one for washing away mechanically adherent mucoid matter, pus, and dirt from wounds without injury to the healthy subjacent cells.

A weaker solution (hypoisotonic) will cause swelling of the cells from absorption of water, whilst a stronger solution



(hyperisotonic) causes contraction (plasmolysis) of the cells from loss of water. The pressures developed by saline solutions are often extremely large—e.g., Pfeffer has calculated that a 1-per-cent. solution of saltpetre produces a pressure of 286 c.m. of mercury. This fact explains the great discomfort produced by using pure water or a strong saline solution as a nasal douche. The effect of solutions of varying strengths may readily be observed by mounting drops of blood just drawn from the finger in (1) 0.9 per cent. salt solution, (2) water, and (3) 5 per cent. salt solution. With No. 1 the red blood-discs will be found unchanged (fig. I.), showing that the solution is isotonic with the red blood-corpuscles. With No. 2 the discs rapidly swell from imbibition of the hypoisotonic water, and become globular (fig. II.); finally the outer film bursts, and the red colouring-matter is set free. With No. 3 the discs become crenated (fig. III.) from abstraction of water by the hyperisotonic salt solution. Similar experiments may be performed by mounting a few teased-out cells from the pulp of an apple in saline solutions of different strengths. This process is made use of in determining the internal pressure within plant-cells. A salt solution which neither dilates nor contracts the cell is evidently isotonic with it, and a reference to tables gives the pressure of the solution and consequently that of the plant-cell.

AN ordinance to amend the Opium Ordinance, 1899, was brought before the Ceylon Legislative Council, by which it is proposed to reduce the quantity of the drug which a person can keep in his possession without a licence from 1 lb. to 180 gr.

NUMBERS of experts are convinced that there are nitrate deposits, more extensive than those of South America, extending over all the west of the Sahara from Adar to the coast of the Atlantic and south of Morocco.

A Victorian Jubilee.

WHEN one remembers that it is a little more than fifty years since Victoria became a colony distinct from New South Wales, and that it was the gold boom of 1851 which brought it before the eyes of the world, the celebration of a pharmaceutical jubilee there is deservedly worth noting in these pages. Besides, Mr. Edward Towl, the subject of these notes, carries with him personal interests which should be attractive to British pharmacists anywhere. He was born in Burgh-le-marsh, a small market-town on the east coast of Lincolnshire, in 1831. In 1844 he was apprenticed for five years in his native town, and at the end of his time, in 1849, he went for a few months to Mr. Titus Rainey, of Spilsby, as improver, and then to Mr. John Provost, of Huntingdon, who had been an assistant with Messrs. Ferris, Brown & Score, of Bristol. At the end of 1849 Mr. Towl proceeded to London and obtained a situation with Messrs. Preston & Sons, wholesale druggists, Smithfield Bars, now Hodgkinson, Prestons & King, Bishopsgate Street. In 1851 Mr. Towl passed the Minor, and his certificate bears the number 144. His examiners were Peter Squire, Henry Deane, John Gale, J. T. Davenport, and Jacob Bell. About June, 1851, Mr. Towl relinquished his position at Preston & Sons, to obtain further experience in dispensing, and secured an appointment with Dr. Geo. Ord, F.R.C.S., of Brixton, with whom he remained twelve months. The rush to the goldfields in 1851-2 carried Mr. Towl with it. He left England in July, 1852, in the ship *Arundel*, of the White Horse Liners, Liverpool. The voyage occupied 125 days, the trip being accomplished without putting into any port between Plymouth and Port Phillip. The s.s. *Great Britain* was found lying in Hobson's Bay, after her first voyage to Australia.



MR. EDWARD TOWL.

A few days after Mr. Towl arrived in Melbourne he received an appointment with Mr. Edwin Plummer, of Elizabeth Street, who was a brother-in-law to Mr. John Hood, uncle of Mr. Justice Hood. About May, 1853, Mr. Towl proceeded to Ballarat. After looking round for a few weeks, he essayed a journey to Geelong, and purchased a small stock of drugs, the whole of which was packed in a discarded ship's medicine-chest. Cartage from Geelong to Ballarat (54 miles) was 60% per ton, and Mr. Towl's consignment cost 12%. He erected a small tent at Prince Regents, Ballarat East, where the bulk of the digging-population was located, near to a rich claim called the "Jeweller's Shop," and not far from the claim from which the first large nugget (the "Canadian") had shortly before been found. Mr. Towl commenced business there on September 13, 1853. At that time the site of the present city of Ballarat was covered with thick bush, the first weatherboard buildings being Bath's Hotel and the Bank of Victoria. The Government offices were tents, and the lockup was constructed of logs.

The population was very unsettled—the diggers frequently moving their tents to another rush. Mr. Towl followed the crowd to what was called the "Flats," near the Yarrowee Creek, and shortly after settling there heavy rains set in and the flats were flooded. Then a fresh rush occurred to the Eureka early in 1854; this was Mr. Towl's last move. There were very few women or children on the field, and as the bulk of the population was composed of strong men in the prime of life, there was no great demand for medicines.

Mr. Towl, tiring of the migratory life, sold his tent and belongings on the Eureka and returned to Geelong. In May, 1854, he opened business in the Pivot and remained until 1860. At the latter end of that year he returned to Ballarat, and acted as assistant to Robinson & Wayne, of Bridge Street, succeeding the late Joseph Longstaff, who was afterwards a partner in the firm of Keogh Longstaff & Co., wholesale druggists of Melbourne. Three months had elapsed of his engagement with Robinson & Wayne when they dissolved partnership, Mr. Robinson going



TOWL'S PHARMACY, BALLARAT.

out. Mr. Wayne continuing the business, Mr. Towl remained another three months with Mr. Wayne, on the understanding that Mr. Henry Brind, on his arrival from England, would take his place with a view to partnership, which was afterwards effected. Mr. Towl then commenced business on his own account in Sturt Street, and for forty-one years has been engaged fully in his business in the present shop at No. 32—viz., from May, 1862. During Mr. Towl's fifty years' residence in Victoria he has twice revisited the Old Country, and contemplates another trip this year if well and active.

A few of the prices obtained for goods in the early fifties in Victoria may be quoted: Wholesale prices—quinine, 20s. per oz.; acid. tart., 7s. per lb.; powdered ginger, 5s. 4d. per lb.; bals. copaiba, 12s. lb.; pot. iodid., 80s. lb.; sugar, 1s. 3d. per lb.; sod. carb., 1s. 6d. per lb.; camphor, 1s. per oz.; ol. jecoris, 1s. per oz.; tr. gent. co., 1s. per oz.; ol. lionis, 27s. per lb.; seidlitz-powders, 30s. per doz.; chloroform, 12s. 6d. per oz. Retail prices: prescriptions, 3vj. mixts., 5s. 6d.; 3viij. mixts., 7s. 6d.; powders, 1s. each; draught and powder, 5s.; Epsom salts, 6d. per oz.; seidlitz-powders, 1s. each; 20 gr. quinine, 3s. 6d.; leeches, 1s. each; cod-liver oil, 8 oz. bottles, 12s. 6d.; Oj. lot. plumbi, 5s.; cream tartar, 7s. per lb.; hair oil, 2s. 6d.; tooth extraction, 10s. each; ginger powder, 1s. 6d. per oz. Holloway's ointment and pills (small), 3s. 6d. per box; Parr's life pills, 2s. 6d.; Keating's lozenges, 2s. 6d.; olive oil, 7s. per pint; soft soap, 2s. per oz.; logwood, 6d. per oz.; sulphate, iron, 1s. per oz.; lint, 8s. per lb.

Santal-wood Oil.

By ERNEST J. PARRY B.Sc., F.I.C., and C. T. BENNETT, Ph.C.

WE have recently had occasion to make some very full investigations on several samples of santal-wood oil, and publish the following figures as adding to the recognised constants for this oil, especially as we have obtained them from a series of authentic samples, and have found them to be very constant among themselves.

The physical characters of the acetylated oil, which must be prepared in order to determine the santalol-value, are very constant, and appear to differ from those of the oil itself only through the direct influence of the acetic acid introduced into combination, and would be materially affected by the presence of non-acetylisable constituents.

The following figures were obtained from six samples :

---	Sp. Gr. at 15° C.	Rotation (100 mm.)	Refractive Index at 20° C.
1. English	0.986	—	1.4916
2. Dutch	0.9875	-14°	1.4915
3. German	0.9860	-14°	1.4895
4. English	0.9880	-14° 30'	1.4894
5. English	0.9870	-14° 10'	1.4899
6. English	0.9885	-13° 50'	1.4900

Four samples were distilled in fractions of 10 per cent. under reduced pressure, and the various fractions examined. The following figures were obtained :

A				B			
---	Sp. Gr.	Rotation	Ref. Index	Sp. Gr.	Rotation	Ref. Index	
1 ...	0.970	-19° 30'	1.5055	0.975	-19°	1.5060	
2 ...	0.970	-17° 20'	1.5060	0.969	-18°	1.5044	
3 ...	0.972	-16°	1.5060	0.969	-18°	1.5068	
4 ...	0.974	-16°	1.5065	0.972	-16°	1.5070	
5 ...	0.977	-15° 30'	1.5068	0.976	-14°	1.5072	
6 ...	0.978	-15°	1.5068	0.979	-15° 30'	1.5080	
7 ...	0.980	-16° 40'	1.5079	0.982	-16°	1.5080	
8 ...	0.980	-18°	1.5080	0.984	-17° 20'	1.5075	
9 ...	0.984	-21°	1.5084	0.982	-21° 30'	1.5085	
Residue	—	—	—	—	—	—	

C				D			
---	Sp. Gr.	Rotation	Ref. Index	Sp. Gr.	Rotation	Ref. Index	
1 ... { (con- tained some water) }	—	-21°	1.5067	0.977	-18°	1.5078	
2 ...	0.970	-17°	1.5064	0.964	-17°	1.5038	
3 ...	0.970	-15°	1.5063	0.969	-16°	1.5051	
4 ...	0.974	-15°	1.5071	0.975	-15°	1.5068	
5 ...	0.977	-15°	1.5075	0.979	-15°	1.5072	
6 ...	0.978	-15°	1.5080	0.980	-14°	1.5078	
7 ...	0.978	-15°	1.5080	0.981	-16°	1.5083	
8 ...	0.979	-17°	1.5082	0.981	-18°	1.5083	
9 ...	0.980	-20°	1.5086	0.978	-22°	1.5086	
Residue	0.988	—	1.5123	—	—	—	

The refractive index of pure santal-wood oil, as shown by the examination of eight samples, is about 1.5060, and should never fall below 1.5030. The limits in the eight samples were 1.5040 to 1.5075. It is clear from an examination that no fraction should ever be obtained with a refractive index below 1.5000, and the optical rotation (if the oil be distilled in ten fractions) should only vary within very narrow limits.

Chemists' Calendars.

MR. HORACE WATSON, Cleethorpes, the proprietor of Watson's Family Pills, issues a monthly tear-off calendar. It is designed to advertise the pills, but the advertisement on the top is by no means aggressive. The calendar portion is distinct and useful for office purposes.

MR. JOHN CLEWORTH, 56 Ducie Street and Lloyd Street, Greenheys, publishes a nicely illustrated almanac and diary. It contains a price-list of proprietary articles, and insures the receiver for 100l. An article called "Hints to Mothers" consists of racyly written but somewhat alarmist notes on children-rearing.

A POCKET LOOKING-GLASS AND PERMANENT MEMORANDUM-BOOK, which Mr. Alexander Turner, Dumfries, distributes to customers, is a capital advertising-medium. It does not really fall under the heading of this section, but we place it here as it only needs a calendar impressing on the back to increase its usefulness tenfold.

RIDLEY'S ALMANAC, which reaches us from Carlisle, contains a price-list of drugs, proprietary articles, and sundries, and a useful hint is given by the inclusion of an addressed order-form. The form has a double purpose, as if goods to the value of 2s. 6d. and upwards are ordered upon it a free cake of soap is sent when executing the order.

BIGGLESWADE is well supplied with an annual in the household almanack which Messrs. Spong & Son have just issued for the 54th year. The directory and the particulars of local administrative bodies are most useful features. The local information extends to the neighbouring villages. Messrs. Spong & Son make excellent use of the advertising pages.

IN MR. H. PAYNE'S WESLHPOOL ALMANACK FOR 1904, the interesting sketch of the origin and subsequent history of Welshpool is continued from a previous year. The section for 1904 deals with the period between 1615 and 1725. This is in addition to a short account of modern Welshpool. Features like this give an almanack a permanent place amongst all who take an interest in local affairs. With the other useful notes, and Mr. Payne's own advertisements, an excellent almanack has been produced.

MR. SAMUEL LAWRENCE, 101 George Street, Oban, has brought out his West Highland Almanac for the seventeenth year running. This year's edition is not behind previous almanacs, and recipients will need to scan its pages very closely, as there is a competition depending on the discovery of a missing letter in the very numerous announcements of Mr. Lawrence's specialities. The local and general information is very complete, the sick-room and health notes and the table of incubation-periods of infectious diseases being most useful.

MESSRS. BAKER & SON, East Gate Pharmacy, Chichester, publish two calendars: the one for general distribution has been produced for forty-five years, whilst the other is for farmers, being devoted to agricultural and veterinary preparations. The advertisements in both almanacs refer exclusively to Messrs. Baker's preparations. Many of the "known, admitted, and approved remedies" are "prepared according to 'Pharmaceutical Formulas.'" The pages devoted to surgical appliances should tend to keep the trade in these articles in the neighbourhood, as full particulars of sizes and prices are given.

ACCORDING to latest reports, the technical colleges of Germany are attended by 12,384 German and 2,242 foreign students, 43 per cent. of the latter being Russians. Some of the German papers are protesting against the admission of foreigners to German technical seats of learning, fearing it will injure the manufacturing and export interests of Germany.

H.M. CONSUL at Paramaribo (French Guiana) states that during 1902 the exports of oil of rosewood to France amounted to 3,239 kilos., valued at 93,506f. The wood itself was formerly shipped to France, but two factories have recently been established to distil the essence, which is now shipped to France in carboys. The wood is sold in the local market at 80f. (3l. 4s.) per ton, and the average product of 1 ton of wood is 22½ lb. of oil, the price in France being about 10s. per lb.

An Artistic Pharmacy.

IT is refreshing to note any deviation from the conventional style of fitting pharmacies, and those who want to see something quite new should visit Wigmore Street, where Messrs. Croyden & Co. recently removed to a new place. The fittings are in the quaint Dutch style, and are constructed of light fumed oak, hammered-steel furniture, and leaded green glass, all specially designed, giving remarkably good relief. This treatment is peculiarly adapted to pharmaceutical fittings, as it combines refinement of design with the practical requirements of the dispenser, and being manufactured from specially selected oak is of almost endless durability. The archway across the shop has a very pleasing effect; the cornice is supported by square taped oak pillars—framed panels on each side glazed with leaded glass made from old bottle sides and ends—and finished on top with an early style pediment and rails, the name being in quaint lettering, which stands out well in black. An antique stable-like lantern hangs from the centre of the arch-



way, the whole reminding one of a bit of old Bruges. The wall-cases are also a study, the doors being glazed with small old leaded lights, with shaped heads and old strap hinges. Overhead is a Nuremberg clock, with square hammered-steel face and black-metal figures and hands. The pilasters supporting the shelves and the overhanging cornice are in the earliest style; the oak drawers, with old pattern metal labels and handles, are also features worthy of note.

The business done in the pharmacy is exclusively dispensing, and as many professional men drop in every day they are specially provided for, a desk, with books of reference, being fixed immediately behind the window enclosure. The dispensing department, behind the archway, is well appointed, and gives working space for three or four dispensers. There is a large working room in the basement, where galenicals, &c., are made, and there also packing is done.

The unique fittings of the shop were designed by Mr. Stanley Bowling, who was educated in Bruges, and spent much time in Antwerp and other old cities. His firm, Messrs. Bowling & Son, Gun Street, Bishopsgate, E.C., did all the work; and Mr. John Marshall, proprietor of the business, gave them a free hand in making the whole pharmacy consistent with the dignity of the neighbourhood.

A GREAT effort has been made to initiate the cultivation of the Chinese poppy in North Borneo by the importation of trained planters who were sent to Tenio. The plan has failed, however, and the planters have gone back to their own country.

Lead in Ammonium Carbonate.

By CHARLES T. BENNETT, Pharmaceutical Chemist.

A FEW months ago attention was called to the fact that a solution of ammonium acetate met with in commerce contained traces of lead. This was found to be due to the acetic acid from which it was prepared, since samples of the acid, when neutralised with pure ammonium carbonate (or solution of ammonia), gave a marked reaction with sulphuretted hydrogen. The sulphide deposited on heating was filtered out, and from it chromate and iodide of lead were prepared. The ammonium carbonate was tested by neutralising with pure hydrochloric acid.

Since then we have been able to obtain pure samples of acetic acid, but batches of liquor ammonii acetatis prepared from these with commercial carbonate of ammonia were still found to contain traces of lead. It was, therefore, evident that the impurity must now arise entirely from the commercial carbonate of ammonia, and further experiments have confirmed this. Sulphuretted hydrogen, passed through a filtered solution of the carbonate (1 part in 4 parts of distilled water), gives a coloration with many samples of the commercial salt, and more especially with the samples of powder. The lead thus appears to be present in a soluble form, possibly as carbonate, that salt being soluble in water charged with carbonic-acid gas, which is produced by partial decomposition of the ammonium carbonate during heating. The sulphide separates after heating for some time, and it can then be completely filtered out, dissolved in a little strong nitric acid, and the solution evaporated to dryness. From the neutral nitrate thus obtained the chromate, iodide, and sulphate of lead may be formed.

The contamination seems to arise from the use of leaden plant, on which the carbonate must be assumed to have some action, since metallic particles of lead are not visible in samples which have been stored.

The quantity of lead present is not very great, being about 1 in 20,000 in the worst sample (of powder) that I have examined, or just over $\frac{1}{2}$ gr. in a pound, but this is sufficient to give considerable darkening with sulphuretted hydrogen. It is an open question whether such an infinitesimal amount can be considered dangerous, taking into account the comparatively small quantities present in the maximum dose of liquor ammonii acetatis.

The above experiments were carried out in flasks made of lead-free glass, in order to ensure the absence of possible contamination therefrom.

Wright, Layman & Umney's Research Laboratories.

THE GERMAN ECONOMICAL SOCIETY is offering a prize for a new pigment for tattooing black-eared pigs. The tattooing of white eared pigs is well known and successful, but a dark colour is useless for dark ears. Two prizes are offered amounting to 500m., with an additional 100m. per annum for every year the tattoo lasts beyond the first year. The competition is open till January, 1, 1905, and all particulars can be had of the Deutsche Landwirtschafts Gesellschaft, 14 Dessauer Strasse, Berlin, S.W.

AN ANCIENT EGYPTIAN PHARMACY.—An article in a Roumanian pharmaceutical journal tells all that is at present known concerning the pharmacy of the ancient Orient. The author has, among other things, described the travelling pharmacy or, perhaps more correctly, the toilet case of the Queen Mentuhotep, dating from about 3000 B.C. The principal contents of the case were cosmetics, the indications being that Mentuhotep was as much devoted to cosmetics as was her more celebrated successor Cleopatra, some 2,000 years later.

Drug-trade Tokens.

It may not be generally known that about the middle of the seventeenth century, there not having been up to that time an authorised copper coinage, and the want of small change being very inconvenient and severely felt by traders and the public at large, that it became frequent for tradesmen and even town authorities to issue small copper pieces, generally of the current value of a farthing, a half-penny, or a penny, for circulation in their own immediate neighbourhood. Nearly all these tokens, as they were called, had upon one side, generally the obverse or face, the name of the issuer, and an emblem of his trade or profession, or the sign of the house in which the business was carried on, whilst upon those issued by corporate bodies, as a rule, will be found the arms of the place, as on the Oxford is seen an ox crossing a ford, and the inscription, "The Mayor of Oxford token."

Between 1648, when tradesmen's tokens were first issued in any quantity, and 1674 it is calculated that upwards of twenty thousand varieties were struck, but only about half this number are now known. The collection of tradesmen's tokens in the British Museum contains between four and five thousand specimens, and there are large collections in the Bodleian Library at Oxford, and the Guildhall, London. The nucleus of the last-named collection was formed by the late Mr. H. B. H. Beaufoy, who presented the City of London with his entire cabinet, numbering 1,174 specimens issued almost entirely by London tradesmen. There are numerous other collections both in the provincial museums and in the hands of private collectors.

In 1672 took place the first general issue of Charles II. copper farthings, and as will be seen from the following proclamation published in the "London Gazette," July 25 of that year, it became from that date illegal to issue from private sources any of these small coins:—

Whereas divers persons who presumed in contempt of His Majesty's authority and the laws of his kingdom to stamp, coin, exchange, and distribute farthings, halfpence, and pence of brass and copper, have by His Majesty's command been taken into custody, in order to a severe prosecution against them, but upon their humble submission and promise not to offend in that kind for the future, His Majesty hath been pleased to remit their offences. To the end that none hereafter may through ignorance incur the danger and penalties that attend such practices, These are to give notice that it is His Majesty's pleasure that no person or persons for the future make, coin, exchange or use any other farthings or tokens than such as are coined in His Majesty's Mint, His Majesty having given such directions for the speedy making of a considerable quantity of farthings to be made current for exchange of moneys, by his proclamation now preparing for that purpose.

Notwithstanding the King's leniency to those who had issued these tokens, it became necessary to issue another proclamation in 1674, after which they rapidly disappeared from circulation.

Mr. G. E. Hare, of Nottingham, sends us several photographs of tokens in his possession, which are of a later date, and in the course of some notes regarding them says:

In 1787, the Government having for a long time neglected to issue an adequate quantity of copper coins for the use of trade, and as the regal coinage having been so counterfeited that barely one-fourth in circulation had been coined by the royal mint, the Anglesey Copper Mines Company put into circulation over 300 tons of copper pennies and halfpennies. The example thus set was followed by companies, corporations, and private traders.

Tokens thus becoming so general, attracted the attention of the Government that at one time it was proposed to legalise their circulation, but finally it resulted in orders being issued for a new national coinage.

In 1811, consequent on the great increase in the value of copper, owing to the wars this country was engaged in, the heavy twopenny and penny pieces of the cart-wheel type were melted down, and the copper currency again became deficient. In that year the various copper companies and others again resorted to the issue of batches of tokens, and these continued until 1817. Then an Act of Parliament was passed prohibiting their manufacture, and the issuers ordered

to take up all they had circulated before January 1, 1818. Thus practically ended the issue of genuine traders' tokens in this country, with the exception of the penny tokens issued by the overseers of the poor for the towns of Birmingham and Sheffield.

Amongst the tokens issued at this time was one by Basil



FIG. A.

Burchell (Fig. A). This token should be more correctly classed as a trade ticket, as it bears on its obverse:

Basil Burchell Sole Proprietor of the famous Sugar Plumbs for Worms 78 Long-Acre.

And on the reverse:

Basil Burchell Sole Proprietor of the Anodyne necklace for children cutting teeth.

The issuer of this token was a vendor of some of the nostrums for the alleviation of infantile diseases, and, from



FIG. B.

the numerous pieces of the kind which he had struck, seems to have carried on a thriving business; and ultimately found it necessary to adopt the edge inscription of, "This is not a



FIG. C.

token but a medal," in order, it is supposed, to prevent him being called upon to cash the pieces as tokens. The piece in Fig. A is not pierced, and it must therefore be presumed



FIG. D.

the others were attached to the anodyne necklace. None of these pieces are dated, and from the number issued there is no doubt the business was a thriving one, and it was carried on well into the nineteenth century by Burchell's family, in the

same name and also in the same street or "acre." The necklace is still stocked by Messrs. F. Newbery & Sons, who quote the retail price as 9s. each.

J. Ching (London) issued a token (fig. B), which is also shown. The obverse of this token consists of a male bust looking to the left, in old-fashioned costume, and long hair worn as a queue. The inscription reads:

J. Ching Patentee for Worm lozenges The best medicine in the world. Sold in boxes at 3/6 Packets 1s and in small packets at 6d each.

The reverse consists of the royal arms, supporters, crest and motto, and (continuing from the obverse):

By every principal medicine vender in the Kingdom.

This is another trade ticket, and although no address of the issuer is given, it is a London one. Ching's lozenges were patented in 1796, and are mentioned in the schedule of the Medicine-stamp Act, 1812. Rebecca Ching patented improvements in the lozenges in 1808. Ching is supposed to have founded the business of Butler & Crispe, which was carried on till late years at 4 Cheapside.

An interesting and rare drug-trade token is that of John Clarke (Birmingham), of which I am not able to give an illustration. The obverse of this token consists of Britannia crowning with laurel a bust of Geo. III. It is inscribed "Birmingham Halfpenny." The reverse has an oak tree and ships at sea. Upon the raised rim is "Britannia Tutamen, MDCCXCV." The edge is inscribed "John Clarke, Bull Street." The chief design of this token must be construed in connection with passing events at the time it was struck. War and sedition were rampant, and although the King's speeches on the opening of Parliament were patriotic, in October of this year (1795) he was grossly insulted on his way to the House, his coach stoned, and the window broken. Therefore this token must be looked upon as the act of a loyal citizen applauding the actions of his king. John Clarke was a chemist, druggist, and perfumer, preparer of indelible, permanent ink.

J. Chester, chemist and druggist, Bristol, issued both pennies and halfpennies. The obverse consists of the arms of Bristol within a circle, "Prosperity to the City of Bristol" being the legend. The reverse has a full-length figure of Claudius Galen bearing a staff. The legend round reads, "J. Chester, Druggist and Chymist." The design for the reverse is certainly a good choice for the issuer as one of the craft. (Fig. C)

A token bearing the date 1795 was issued by John Peckham, chemist and druggist, Slough, in Buckinghamshire. The obverse has a phoenix and is inscribed "Slough, Bucks, halfpenny token, 1795." The reverse has a shield of arms and the name of the issuer. This piece is of exceptionally fine workmanship, and although dated for the eighteenth century, it is supposed to have been issued by one Wm. Till about 1835, either to meet the increasing demand for tokens, or as a memento of his native village and the associations connected with it. (Fig. D.)

Isaac Swainson (London), proprietor of Velno's vegetable-syrup, issued a metallic address-card. The obverse consists of a bust of the issuer and legend "Isaac Swainson," and the reverse a female figure, intended for the goddess Hygeia, dropping herbs into a still, and is inscribed "Hygeia preparing Velno's Vegetable Syrup." By an error in spelling the illustrious individual's Christian name the piece never came into circulation. The order having been countermanded, only about a dozen impressions were taken, and the world lost the advantage of becoming familiar with the likeness of another benefactor in the patent-medicine line. Isaac Swainson & Co. carried on business at 21 Frith Street, Soho. Velno's syrup was patented in 1772 by John Burrows, and is still prepared by Barclay & Sons, Farringdon Street. In the "London Directory" for 1838 "Margaret Canham, 52 Berners Street, Oxford Street," is given as the sole proprietor of De Velno's syrup.

A correspondent (91/19) sends us the following note on some tokens which he has in his collection. It may help towards the compilation of a metallic history of pharmacy if you were to give illustrations of the coins I send. The tokens are only of indirect interest to pharmacists, but as the subject is a new one I think many of your readers will appreciate a reference to it in the *C. & D.* Nos. 1 and 2

are the obverse and reverse of a trade ticket issued by Dr. Eady, 38 Dean Street, Soho. It is not dated, and its issue would now a days probably lead to the doctor's name being



No. 1.



No. 2.



No. 3.

expunged from the medical register for "infamous conduct." Nos. 3 and 6 are farthing tokens, both dated 1793. On the reverse of No. 3 is Britannia, sitting, with a spear in the right hand and a flower in the left hand. The reverse of No. 6 shows a cornucopia and branch. Nos. 4 and 13 are advertisement tickets of Warren's blacking. The small one shows on one side the wording "Warren's blacking, 30 Strand," and picture of a man shaving, the shaver using as



No. 4.



No. 5.



No. 6.

a mirror a Wellington boot polished with the blacking in question. The other side lettered, "The effect of Warren's blacking, London," shows a cock quarrelling with its own image mirrored on the surface of a boot. The larger coin (No. 13) has on the obverse a portrait of Warren and lettering, "R. Warren. The inventor of Japan Liquid blacking." The reverse has on it an outline picture of a jar of blacking with the words, "Robert Warren, Liquid Blacking Manufactory,



No. 7.



No. 8.

No. 14 St. Martin's Lane London." No. 5 is a trade advertisement. The side shown in the photograph has upon it a tea canister and words, "H. Colman, Tea, Coffee, Spices, Pickles, Fish Sauces, etc." On the other side the inscription is, "Grocer, Tea Dealer and Cheese Factor. H. Colman 1 Exchange St. Norwich 1848." No. 7 is a token issued by the Burnt island Vitriol Company, 1797. The carboy of vitriol has on either side the rose and thistle emblems. The reverse has upon it the motto, "Nemo me impune lacessit." The next (No. 8) is a penny token issued by the Hull Lead Works. The obverse shown in the illustration is dated 1812, and portrays a view of the lead works. The reverse has on the rim, "Payable in Bank of England or Hull notes by I. K. Picard." No. 9 is included here to commemorate a daring feat in advertisement. Some years ago French bronze coins (of the size of a penny and halfpenny) were imported into this country and became recognised in common usage as interchangeable with the penny and halfpenny. It is illegal to deface the British coinage, but the illegality does



No. 9.

not extend to foreign coinage in this country. Here was the advertiser's chance, and it was seized by Messrs. A. & F. Pears, who procured enormous quantities of French pennies



No. 10.

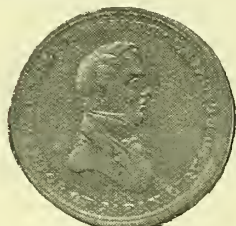


No. 11.



No. 12.

and stamped them with the words, "Pears' Soap." The scheme was a great success, but it resulted in the foreign coins being bought in by the Mint, and their circulation as pennies and halfpennies being stopped. "Dr. Winn's Black and Blue reviver for restoring all kinds of faded mourning" is advertised by T. Pryce on No. 10. No. 11 is an optician's



No. 13.



No. 14.

advertisement—F. West, 17 Russell Court, Drury Lane. John Elliott, Newcastle, is the tobacconist who issued No. 12 in 1814. The last one (No. 14) is a Bath token issued in 1794 by the Botanic Gardens proprietors. It has texts round the rims of both obverse and reverse.

"PHARMACEUTICAL FORMULAS," VOL. 2.

This supplementary volume is now in the press, and the proof-sheets show that it will be the finest book of recipes, particularly dealing with medicinal specialities, which has ever been published. The price will be 10s., or post-free 10s. 6d. This, like all other C. & D. books, will be obtainable as soon as ready through most wholesale houses at 10s. The following is a preliminary list of such houses;

C. & D. Offices, London, Melbourne, Sydney, and Adelaide.
Allen & Hanburys (Limited), Bethnal Green, N.E.
Ayrton & Saunders, 34 Hanover Street, Liverpool.
Barclay & Sons (Limited), 95 Farringdon Street, E.C.
Bleasdale (Limited), York.
Boileau & Boyd (Limited), Dublin.
Duncan, Flockhart & Co., Edinburgh.
W. Edwards & Son, 157 Queen Victoria Street, E.C.
Evans, Gadd & Co., Exeter.
Evans, Sons & Co., Liverpool.
Evans Sons Lescher & Webb (Limited), 60 Bartholomew Close, E.C.
Fletcher, Fletcher & Co., Holloway Road, N.
Ford, Shapland & Co., 6 Gt. Turnstile, High Holborn, W.C.
John Ismay & Sons, Newcastle-on-Tyne.
J. R. Lockwood & Co., 168 St. John Street, E.C.
Lynch & Co (Limited), 192 Aldersgate Street, E.C.
McKesson & Robbins, New York, U.S.A.
S. Maw, Son & Sons, Aldersgate Street, E.C.
May, Roberts & Co., Clerkenwell Road, E.C.
F. Newbery & Sons, 27 Charterhouse Square, E.C.
W. Paterson & Sons, Aberdeen.
Pinkerton, Gibson & Co., Edinburgh.
Potter & Clarke, 60 Artillery Lane, E.
Raines, Clark & Co., Edinburgh.
Raines & Co., York.
J. Sanger & Sons, 2 Winsley Street, W.
T. & H. Smith & Co., 19 Duke Street, Edinburgh.
Southall, Brothers & Barclay (Limited), Birmingham.
J. Woolley, Sons & Co. (Limited), Victoria Bridge, Manchester.
Wright, Layman & Umney (Limited), 48 Southwark Street, S.E.
Wyleys (Limited), Coventry.

Order early.

South African Medical Congress.

A SUCCESSFUL Medical Congress was held in Cape Town, extending over several days, and was brought to a close on January 4. The proceedings included a visit to Robben Island, a reception, garden-party, and banquet, all of which seemed to be greatly appreciated. At the business meetings of the Congress several papers were read and discussed by members. Dr. Gregory, M.O.H. for the Colony, read an exhaustive and interesting paper on "So-called Scurvy in South Africa"; Dr. Darby Hartley read a paper on "Enteric Fever"; Dr. Waldron followed with one on "Epidemic Pneumonia." Perhaps the most important paper was that dealing with "Human Tuberculosis and the means to be adopted for its Prevention," by Dr. Jasper Anderson. It appeared to him that tuberculosis had been introduced into South Africa by the large number of consumptives who had flocked over in various stages of the disease, and especially in early years, when the communicability of the disease was not generally recognised. The disease appeared chiefly to affect those inhabiting the coast regions. The first measure to be adopted in the prevention of phthisis by a Government body was the provision of well-drained localities, with wide streets and well-built and efficient dwellings. These elementary measures of prevention, he said, had barely been entered upon in Cape Colony. The most pressing matter needed is a Public Health Act, which will cover the Colony, with full powers to deal with sanitation. Dr. Anderson hoped that, as a result of the Congress, an association of those who were interested in sanitation generally, and the prevention of tuberculosis in particular, would be formed. Such a society might be affiliated with the Society for the Prevention of Tuberculosis, or the Sanitary Institute, but the conditions of South Africa are so peculiar to itself that he strongly favoured the formation of an autonomous association for South Africa. Dr. Guillemard followed with a few remarks dealing with the duties of the State in the prevention of human tuberculosis, which disease, he observed, was growing with rapid strides in South Africa. It was going to be a scourge amongst natives not many years hence, as it was inherent in the native mind to prevent ventilation and cleanliness.

A Pharmaceutical Exhibition.

In connection with the South African Medical Congress held at Cape Town, as stated in the foregoing, a room was placed at the disposal of firms wishing to exhibit their products, and some half-dozen local houses availed themselves of this opportunity to display their own goods with those from overseas for which they act as agents. Taking the stands alphabetically, the first was that of Messrs. Burroughs Wellcome & Co's. The photograph shows what it was like. Kepler's malt extract and solution figured prominently on the right, while on the left was a large assortment of medicine-chests, both in wood and aluminium, fitted with unbreakable bottles, if need be. Hypodermic syringes and tabloids were for the most part displayed flat on the stands, together with some of the firm's specialities, hazeline and the "Enule" brand of suppositories. An opportunity to remind the profession of the "Wellcome" brand of chemicals was not lost by Mr. Raven, the representative in South Africa, and good things were placed in the centre of the exhibit. A full range of Messrs. Burroughs Wellcome & Co's products are carried in stock at their Cape Town depôt, 43 Long Street.

Mr. Alex. Cleghorn, Cape Town, showed the goods of Messrs. Evans Sons Lescher & Webb (Limited), Messrs. C. J. Hewlett & Son, Messrs. Ferris & Co., and as sole agent in Cape Colony exhibited Esvach aperient water, made by Messrs. Davy, Hill & Co. Ferris's "Ever-ready" cabinets occupied a prominent position in the corner of the exhibit, and were well supported by the firm's other products, including liquors, bandages, &c. The preparations of Messrs. Evans Sons Lescher & Webb (Limited) on Mr. Cleghorn's stand were well set out. Messrs. Hewlett's antiseptic cream, mist, pepsini co. c. bismutho and liq. santal. flav. c. buchu et cubeba were well to the fore, while two very large cut-glass show bottles backed up the lot. Medical men seemed in-

terested in Esvach water, and the distinct form of bottle should help them to remember it where an aperient water is indicated.

The next exhibit was that of Messrs. Heynes, Mathew & Co., Cape Town, with which was associated that of Messrs. Parke, Davis & Co.; both are shown in the second picture.



Messrs. Heynes, Mathew & Co. have recently taken over the business of Dr. R. Marloth, M.A., Cape Town, and have opened a special department for apparatus, instruments, chemicals, &c., used in scientific pursuits, under the supervision of a scientific man. The display of Messrs. Parke, Davis & Co.'s products consisted mainly of standardised fluid-extracts and specialities. Hypodermic syringes and tablets were among the special features, and when our correspondent was viewing the exhibit Mr. J. L. Buell, of Messrs. Parke, Davis & Co., was discussing adrenalin chloride with a prominent Cape medico.

Messrs. Lennon (Limited), London and Cape Town, displayed Messrs. Oppenheimer, Sons & Co.'s instruments and products, and had a special exhibit of Messrs. Frederick Stearns & Co.'s goods on a separate stand. They showed



instruments in great variety, the surgical-instrument section of the company's business being a big one. A special department for scientific apparatus was established some years ago and assistants were brought from the Old Country to supervise it. The company publishes special catalogues of dental and surgical goods, and were the first firm of

druggists to enter for this section of what is now an established part of their every-day trade.

Among Messrs. Oppenheimer's goods were palatinoids and bi-palatinoids, and every branch of their business was represented, Mr. Rogers on their behalf explaining everything to the visitors. Messrs. Frederick Stearns & Co. exhibited assayed fluid-extracts and pills, besides their pharmaceutical specialities, the exhibit being in charge of their resident representative, Mr. H. Magness-Elgar.

Messrs. Mayer, Meltzer & Co., London and Cape Town, showed surgical instruments. The more ordinary run of instruments having been passed over, the assistant showed our representative the "Mom" electric examination-lamp in operation. The lamp itself can be easily taken from its stand, after being used for the eye or throat, and carried in



the hand for rectal or vaginal examination. The improved Fenton's uterine dilator, modified by Dr. G. A. Casalis, a French surgeon, now practising at the Cape, proved interesting. Messrs. P. J. Petersen & Co. enter seriously into the surgical-instrument business, which is a special department with them, and an assistant, formerly with one of the largest London firms, is in charge. Their exhibit included a portable aseptic operating-table with leg-rests, stirrups, and cushions, and it greatly interested the country practitioners. It is perfectly rigid when in position, weighs only 95 lbs., and folds into a space of 36 by 10 inches. A gas and ether administration apparatus, made with a silk bag instead of the usual rubber, should prove acceptable to the South African medico, since rubber perishes so quickly out there.

It may not be inappropriate here to mention that nearly all ligatures, dressings, &c., appearing on surgical-instrument stands were of American manufacture. The names of Messrs. Johnson & Johnson and J. Ellwood Lee Company greeted one on every hand, but not so an English firm. Our manufacturers should take note of this and arrange to have their products put to the fore.

MR. G. W. KING, Philadelphia College of Pharmacy, in examining samples of cocaine hydrochlorate found them slightly acid. The makers of one specimen explained that "an acid reaction is necessary for the formation of large crystals."

Pharmacie Centrale de France.

THE Central Pharmacy of France was founded by Francois Laurent Marie Dorvault, author of the well-known "L'Officine," who in 1830 went to Paris from Nantes, served his apprenticeship, attended the Paris School of Pharmacy, became "interne" in a hospital in 1830, and after passing his final examination opened shop in the Rue de la Feuillade, close to the Bank of France. M. Francois E. Genevoix succeeded him as director of the establishment, and remained in the position until 1889, when he retired, and was



M. CHARLES BUCHET.

succeeded by the present director, M. Charles Buchet, a Parisian, born in 1848, and an old pupil of Chevreul. M. Buchet served in the Franco-German War, first as an infantry private, and latterly as "aide-major"; took his "first-class" pharmacy degree, entered the Pharmacie Centrale, and had worked steadily up from the post of "econome" (bursar) to that of sub-director when M. Genevoix retired. He received the Legion of Honour in 1896.

The history of the establishment may be briefly told. In March, 1852, Dorvault issued his circular to the pharmacists of France asking them to take shares in a "Pharmacie Centrale des Pharmaciens." The immediate result of his appeal was the

formation of a Committee of Organisation, including men from all parts of France.

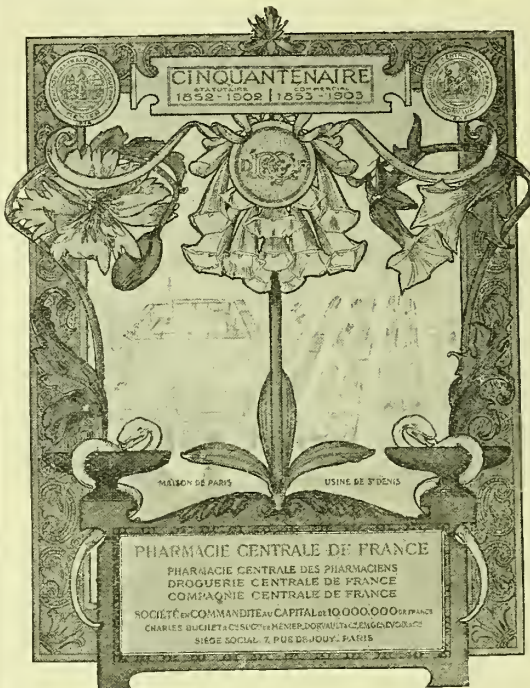
It was proposed to issue 2,000 shares of 500f. (20%) each, and in September, 1852, 800 had already been taken up. The first general meeting was held in October, premises were taken in the Rue des Marais-St.-Germain (now Rue Visconti), and a laboratory opened at Courbevoie.

Business commenced in January, 1853. In 1855 the original capital of 40,000% was increased to 160,000%, and the first title of The Pharmacists' Central Pharmacy changed to its present form, The Central Pharmacy of France.

In 1859 the rue Visconti premises were found insufficient, and the hotel d'Aumont was purchased. The Lyons branch dates from shortly after the creation of the Paris establishment, and houses have since been opened in Bordeaux, Toulouse, Nantes, Rouen, Marseilles, Strasbourg, Bayonne, Lille and Rennes. In 1867 the "Droguerie Menier," one of the biggest drug businesses in France, was purchased, the business comprising a Paris house and the St. Denis Model Factory. The trading part of this business was transferred to the rue de Jouy, but the St. Denis works remained as the nucleus of the now extensive works there. In 1870 the Pharmacie Centrale had an annual turnover of some 7,000,000 francs (280,000%). The War and Commune gave a terrible two years' check to all French business, but by 1873 things had been set right and the normal figure again reached. In 1881 the capital became 10,000,000 francs (400,000%). The Paris house (formerly the town mansion of the Duc d'Aumont), with its gardens, covers some 3,500 square yards in the central part of Paris, close to the rue de Rivoli. The fine old house has been preserved and utilised for the library, museum, board-room, directors' apartments, &c. Then comes a pleasant garden, where Dorvault's bust stands among flowers and shrubs. On the other side are the offices and salesrooms, warehouses, packing-house, &c.

At St. Denis, the northern suburb of Paris, the Model Factory is distinguished by its avenues, one of them, "Avenue Menier," being fourteen yards wide and lined with trees. It is said that Berthelot was consulted by the architect of this establishment, and it is noteworthy that all the buildings and avenues are named after famous chemists and pharmacists. We have the avenues Dorvault and

Genevoix, and "rues" Gay Lussac, Berthollet, Lavoisier, J. B. Dumas, and Palangier. The buildings are known as the Pavilions Baumé, Chevreul, Guibourt, Guyton de Morveau, Julliard, Robiquet, Wurtz, &c., &c. The pharmacy pavilion is named after Soubeiran, the alkaloid and glucoside laboratory after Pelletier, the very important building devoted to the manufacture of salts of quinine after Caventou, and the



FRONTISPIECE TO INVITATION-CARD.

The original is beautifully executed in colours.

machinery hall after Denis Papin. These and the Paris house are represented in the centre of the card reproduced here.

To celebrate the fiftieth anniversary of the establishment the directorate entertained a distinguished company on Wednesday evening of this week.

Personalities.

MR. T. M. McNEIL (Messrs. McMurdo & Co., St. John's, Newfoundland) and Mrs. McNeil are now on a visit to England.

MISS INA MILROY, of Detroit, Michigan, has just received the doctorate degree in chemistry at the University of Berlin. She is the first lady to obtain this distinction.

THE MAYOR OF MORECAMBE (Councillor J. R. Birkett, J.P., chemist and druggist) has presented to the Corporation a mayoress's eighteen-carat gold chain.

MR. W. S. GILL, of W. J. Bush & Co. (Limited), manufacturing chemists, Ash Grove, Hackney, N.E., sails next week for a second tour through Canada and the United States. Mr. Gill is booming Potter & Moore's lavender-water in the lands beyond the sea.

MR. AND MRS. THOMAS F. SPIVEY, Market Place, Howden, have just celebrated their golden wedding. They were married at Holy Trinity Church, Hull, fifty years ago, and settled at Howden, where Mr. Spivey has carried on business as chemist and druggist. He was for many years postmaster at that town, and on his retirement was congratulated upon the excellent manner in which he had discharged his duties. Mr. Spivey belonged to Cliffe, near Selby, and served his apprenticeship at Selby.

Stamped=medicine Notes.

Grocers' Discussions.

Besides the pertinent remarks of Alderman Parkinson at Burnley (see *C. & D.*, January 16, page 96) the new reading of the Medicine-stamp Acts was discussed last week by grocers' associations at Grimsby, Cardiff, Pontypridd, and Newport (Mon.). At Grimsby Mr. Hopkinson said the matter interested him. He had some pills in stock, and had had to have them re-labelled. The President of the Cardiff Association said he did not think the question affected their Association very much. It applied more to grocers who lived in the country, and who were in the habit of retailing pills and potions. The Chairman at the Newport meeting said he understood pills must not be called liver or headache pills. "Health-salt" would be exempt, but "Liver-salt" would not. It was suggested that each member of the Association should be supplied with the list [of dutiable and non-dutiable articles] which the Parliamentary Committee of the Grocers' Federation are obtaining from the Commissioners of Inland Revenue, and should comply strictly with the requirements of the Acts. At Pontypridd the opinion seemed to be that the Acts would not affect town tradesmen to any great extent, as very few dealt in patent medicines. It would, however, affect the small shopkeepers.

Numbers on Labels.

A correspondent (26/73) thinks our remarks under "label-making" last week "infer that it is not necessary to number the formulas on medical labels, but merely 'prepared according to *C. & D. Diary*, 1904.'" That was not our idea, and we specially referred to "a stated formula," which, of

course, means *the* formula from which the medicine is prepared, and if it has a number the number must be given.

Decay of the Teeth.

Mr. John A. Cope, of Derby, writing in regard to the Eau dentifrice label reprinted on page 139 of the *C. & D.*, January 23, informs us that a few years ago the Board of Inland Revenue insisted on him paying a penalty of 1*l.* for using on an antiseptic tooth tincture-label the sentence:

"It arrests and prevents decay of the teeth."

We are not surprised, and up to the receipt of the marked Eau dentifrice label we had advised our correspondents that decay of the teeth is an ailment.

"Female Pills."

Mr. Henry Hunter, of Whitehaven, has favoured us with copies of the following letters:

Whitehaven, January 8, 1904.

The Secretary,
Inland Revenue,
Somerset House,
London, W.C.

DEAR SIR,—On September 17 you informed us that a label for "Female Pills" was liable to stamp-duty. We enclose the label, and would ask you if you would kindly inform us if the decision is affected by the concessions which the Board have made since that date. Our reason for asking you is that in a list of non-dutiable titles compiled by a wholesale firm, and referred to in *THE CHEMIST AND DRUGGIST* of January 2, the title "Female Pills" occurs.

Yours faithfully,
W. F. & H. HUNTER.

26209 S
1903
Inland Revenue,
Somerset House,
London, W.C.,
20th January, 1904.

GENTLEMEN,—In reply to your letter of the 8th instant, I am directed by the Board of Inland Revenue to acquaint you that they do not now regard the title "Female Pills" as involving liability to medicine stamp-duty.

I am, Gentlemen,
Your obedient Servant,
E. C. STOODLEY,
Secretary.

Messrs. W. F. & H. Hunter.

Artificial Serums,

Compiled from the 1904 edition of Bocquillon-Limousin's "Formulaire des Medicaments Nouveaux" (3*e.*; Baillière, 19 rue Hautefeuille, Paris).

	*Chéron	Hayem I.	Hayem II.	Latta	Cantani	Kronecker and Lichtenstein	Schwartz	Herard	Schiess	Crocq	Luton	Mathieu	Dujardin-Beau- metz	Roussel	Sapelier	†Houchard	Vaudevilde	Bardet	Leclerc	Renzi	Sydmann	Truneck
Sodium chloride ...	3.0	5.0	7.5	3.0 to 5.0	4.0	6 to 7.5	6.0	4.5	75.0	—	—	1.0	3.10	—	60.0	5.0	3.0	1.0	4.0	6.0	6.0	4.42
Sodium phosphate...	4.0	—	—	—	—	—	—	125	—	2.0	4.0	4.0	0.5	50.0	4.5	10.0	3.0	3.0	0.5	—	—	0.15
Sodium chlorate...	—	—	—	—	—	—	—	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sodium sulphate ...	8.0	10.0	—	—	—	—	—	—	—	—	10.0	6.0	—	—	—	2.5	—	2.0	0.5	—	—	0.44
Sodium lactate ...	—	—	—	—	—	—	—	—	—	—	—	—	1.0	—	—	—	—	—	—	—	—	—
Sodium carbonate ...	—	—	—	1.7	2.0	0.1	—	—	—	—	—	—	1.0	—	31.0	—	2.5	—	—	—	—	0.21
Sodium bicarbonate	—	—	—	—	—	—	—	—	50.0	—	—	—	—	—	—	—	—	—	—	—	1.0	—
Sodium-caustic solu- tion	—	—	—	—	—	—	m.j.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Potassium iodide ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.0	—	—
Potassium chloride	—	—	—	—	—	—	—	0.25	—	—	—	—	—	—	5.0	—	3.0	—	—	—	—	—
Potassium sulphate	—	—	—	—	—	—	—	—	—	—	—	—	1.0	—	3.5	—	2.0	—	—	—	—	0.40
Carbolic acid ...	1.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Iodine ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.5	—	1.0	—	—
Glycerin ...	—	—	—	—	—	—	—	—	—	—	—	20 c.c.	—	—	—	—	—	—	—	—	—	—
Distilled and steri- lised water	100	1,000	1,000	3,400	1,000	1,000	1,000	1,000	1,000	100	100	ad 100 c.c.	1,000	1,000	ad 1,000	ad 100 c.c.	ad 100 c.c.	ad 100 c.c.	100 c.c.	1,000	1,000	ad 100 c.c.

* Chéron No. 2 is the same without carbolic acid.

† Houchard No. 2 is the same with 1.5 carbolic acid.

Quinton's serum is sea-water diluted to same sp. gr. as blood-serum.

Birth.

BANYARD.—On January 1 at Lucknow, the wife of J. A. Banyard (of Messrs. Peake, Allen & Co., wholesale druggists) of a son.

Deaths.

DAUBENY.—At Bristol, on January 23, Mr. George Daubeney, chemist and druggist, aged fifty years. The circumstances of Mr. Daubeney's death are related on page 145.

DAVIES.—The death is announced, at the age of seventy-one years, of Mr. Thomas Davies, chemist and druggist, of Brynmawr.

DEACON.—On January 22, at "The Victoria Pharmacy," 50 Victoria Road North, Southsea, Mr. Frederick George Deacon, chemist and druggist, aged forty-three. Mr. Deacon was highly respected throughout the town, and is mourned by a large circle of friends and acquaintances to whom his genial and kindly disposition had endeared him. He died from an extremely painful and lingering disease, for the relief of which he had undergone many severe operations without avail. He was unmarried.

HUTCHINS.—At Neath, on January 22, Mr. Charles Hutchins, chemist and druggist, Queen Street, Neath, aged seventy-six. Death was due to a fit of apoplexy.

POLLARD.—At his residence, Calder View, Brighouse, Yorks, on January 21, Mr. Wilson Horner Pollard, chemist and druggist, after a few days' illness, aged seventy-nine. Mr. Pollard was the oldest chemist in the Halifax and Brighouse district. He was a native of the neighbouring town of Mirfield, and was apprenticed to Mr. B. Atkinson, a well-known Brighouse druggist of olden days. When a comparatively young man Mr. Pollard set up in business for himself, and had a successful career. For about forty years he occupied a shop near the Anchor Bridge. He retired some years ago on a competency, and his nephew, Mr. Wilcox, succeeded him. Mr. Pollard was able to get about actively until Sunday last, when he had a paralytic seizure, and never regained consciousness. He never took any active part in public affairs.

RECKITT.—The death has taken place, at Hornsea, of Mr. R. J. Reckitt, at the age of sixty-nine. He was formerly a chemist in business at York, London, and Bury St. Edmunds. Some years ago he retired and went to live at Hornsea.

SMITH.—At the Royal Infirmary, Liverpool, on January 18, Mr. Peter Smith, chemist and druggist, who had been in business at 7 High Street, Runcorn.

TAYLOR.—At 25 Wyresdale Road, Bolton, on January 20, Mr. John Taylor, chemist and druggist, a member of the Council of the Pharmaceutical Society of Great Britain, aged forty-eight years. The last message which we had from Mr. Taylor was on New Year's Day on the portrait-card reproduced here; it was, "Wishing you all the good things you wish for yourself. Am very ill.—J. T." Three months ago Mr. Taylor learned that he was suffering from a sarcomatous growth of the pelvic region, and, knowing the hopelessness of this dreadful malady, he set himself to meet death with that cheerfulness and fortitude which come to men of deep religious faith. The end has come sooner than was expected. Although Mr. Taylor has died in his forty-ninth year, he had crowded over thirty-five years' work into his too short life. As a boy he was a library assistant in his native town of Bolton, and read for the law Preliminary examination, with a view to becoming a solicitor. He entered on that career with enthusiasm, as he was fond of law, but circumstances compelled him to abandon it, and he became an apprentice with Alderman William Blain, chemist and druggist, Market Street, Bolton. In the later stage of his apprenticeship, and as an assistant, he travelled to Manchester, in order to study for the Minor examination under the late Mr. Louis Siebold. He was an apt student and hard worker, and after he qualified in 1878 he hoped to go in for the Major examination, but again fortune prevented him, an opportunity for acquiring the business of Mr. Watson, Deansgate, Bolton, being too favourable to neglect. This was over twenty years ago. Subsequently he transferred the business to St. George's Road, Bolton, and carried it on until

a little more than a year ago, when he sold out on getting an appointment on the representative staff of Kodak (Limited), a change of work which greatly delighted him. Mr. Taylor had, during the past dozen years or more, been well known to Manchester chemists as one likely to take a place in pharmaceutical leading. His thoughtful papers and sound views on the questions of the day marked him out as a man likely to do the craft good service. He first stood for the Pharmaceutical Council in 1900, and on that occasion he, with Mr. A. Cooper and Mr. A. C. Wootton, displaced



Messrs. Bateson, Grose, and Warren. He was re-elected last May. As a councillor, Mr. Taylor was quiet; he was feeling his way, he told us last summer, and hoped, through his frequent calls on chemists in the North, to be able to reflect very truthfully the feelings of the trade on prominent questions. Mr. Taylor is survived by a widow and three daughters, the youngest of whom is fifteen years old. He was a Congregationalist, and occasionally occupied the pulpit in free churches in Bolton and its neighbourhood. The interment took place at St. Peter's Churchyard, Smithells, on Saturday last. A brief service was first held at the house, and the *cortège* then moved off to the Chorley Old Road Congregational Church, of which Mr. Taylor was one of the founders. There, in presence of a congregation of several hundreds, the Rev. W. H. Davison conducted the first part of the Burial Service, which was completed at the graveside in St. Peter's Churchyard. The procession from the Chorley Old Road Congregational Church to the place of sepulture was led the church choir, the mothers' and men's classes, and the teachers and officers. Then came the mourners, amongst whom, representing pharmacy, were Messrs. C. B. Allen (Vice-President of the Pharmaceutical Society), Newsholme (ex-President), Bremridge (Secretary), Lord Gifford and Dr. Symes (members of Council); Mr. J. Wild and Mr. Pidd, representing the Manchester Pharmaceutical Association; Mr. Johnstone (Manchester), on behalf of the British Pharmaceutical Conference; Messrs. Blain, Hart, and Knott, on behalf of the Bolton Chemists' Association; and Messrs. Waller, Teebay, and Watkinson (Walkden), chemists and druggists. We are indebted to Mr. Percy Knott for a photograph of the grave, which, after the interment, was covered and surrounded by wreaths of flowers, including tributes from the Pharmaceutical Society and the Bolton Chemists' Association.

WILLIAMS.—At Carnarvon, on January 25, Mr. William Parry Williams, chemist and druggist, at the age of ninety-two. Mr. Williams had retired from business. He was a past mayor of Carnarvon, and up to a few years ago filled one of the aldermanic seats. He was also the first chairman of the Carnarvon School Board, a position which he retained for about twenty years. Two of his sons are doctors—one at Carnarvon, and the other at Cardiff.

Diary Competition.

THE number of B. postcards that have been sent answering the questions put concerning the advertisement pages of THE CHEMISTS' AND DRUGGISTS' DIARY, 1904, has been as large as usual, and, if anything, more interesting. They present various new features, as was to be expected with a Diary which broke the record in advertisements as well as in the quantity and value of literary matter it contained. The result of the competition illustrates once again the value from an advertising point of view of a consecutive series of well displayed and illustrated pages. The competitors have awarded the merit to the various advertisers as follows:—

1. Which is the best advertisement in the Diary?—**Vinolia Company (Limited)** (pp. 241-272).
2. Which is the most artistic page in the Diary?—**Stevenson & Howell (Limited)** (pp. 8 and 9).
3. Which is the cleverest business-producing advertisement?—**Daisy (Limited)** (pp. 526-529).
4. Which are the most artistic perfumes or toilet articles?—**Vinolia Preparations.**
5. What ailment-name preparation advertised do you sell most of?—**Bile Beans** (p. 525).
6. Vote for the "protected" article you like best?—**Daisy Powders.**

The answer to the first question made the sorting of the cards rather exciting. It looked as if the replies indicated a dead-heat between Vinolia and Allen & Hanburys (Limited) (pp. 194-200). As a matter of fact, the voting was so close that Vinolia only won by four votes, the exact figures being:—

VINOLIA	...	...	...	...	105
ALLEN & HANBURYS	...	...	...	...	101

Next in order came Daisy (Limited), then Idris & Co. (Limited) (p. 468), followed closely by Goodall, Backhouse & Co. (pp. 498, 499); Paris Medicine Company (pp. 378, 379); Stevenson & Howell (Limited); Maw, Son & Sons (pp. 14, 15); Jones & Co. (pp. 33-38); G. B. Kent & Sons (Limited) (p. 136); and many others.

A marked feature of the competition is the popularity of Allen & Hanburys (Limited). While not actually securing first place in any of the sections, they rank second in questions 1 and 2 and third in 3, 4, and 6. This indicates well the up-to-date merit of the advertising of this old-established Plough Court company.

Picture advertisements are always popular. This is shown very forcibly throughout the competition. The catholicity of tastes displayed by our critics is indicated by the diversity of their opinions regarding the most artistic advertisements. Thus, while the excellently produced lemons of Stevenson & Howell (Limited) are awarded the palm, the productions of Allen & Hanburys (Limited), of Fletcher, Fletcher & Co. (pp. 23, 24), S. Maw, Son & Sons, Thomas Tyrer & Sons (Limited) (p. 499-500), Cadbury Bros. (p. 506), Idris & Co. (Limited) (p. 468), Elliman, Sons & Co. (pp. 10, 11), J. H. Haywood (p. 631), Van Oppen, Ross & Co. (p. 589), Jones & Co. (pp. 33-38), Evans Sons Lescher & Webb (Limited) (p. 377), &c., have many enthusiastic admirers.

By a majority of 100 over the second the four pages of Daisy (Limited) are voted "the cleverest business producing advertisement." The two striking pages (378 and 379) which illustrate graphically the advantages of Laxative Bromo-Quinine Tablets over gruel as a cold-disperser are given second place. This is a triumph for the *C. & D.* designing department, to which the Paris Medicine Company gave *carte blanche*. Then come Allen & Hanburys (Limited), Vinolia Co. (Limited), the Alliance Drug Company (p. 350), Idris & Co. (Limited), Jones & Co., Matthews & Wilson (pp. 172 and 173), Standard Tablet Co. (p. 321), Elliman Sons & Co. (pp. 10 and 11), H. Sawyer (p. 520), Edward Cook & Co. (Limited) (p. 402), Crown Perfumery Co. (pp. 19-22), C. P. Goerz (p. 101), Lorimer & Co. (Limited) (pp. 30 and 31), P. Joseph & Son (pp. 116 and 117), J. Denoual & Co. (pp. 180-183), W. Butcher & Sons (pp. 95-98), and about fifty others.

The reply to question 4 is decisive, Vinolia winning by a majority of over 150. The multitude, diversity, and excellent setting of the Vinolia pages made this result almost a foregone conclusion. Other favourites are the Crown Perfumery Company (pp. 19-22), with nearly a hundred followers; the toilet preparations of Allen & Hanburys (Limited); of Yardley & Co. (pp. 570 and 571); of the Erasmic Co. (Limited); of Corbyn's perfumery (F. Schutze & Co., p. 519); and of Beetham's Larola (p. 514).

The fifth question appears to have created a little confusion in the minds of some of the competitors. Thirty-one postcards had "Beecham's Pills" down as an ailment-name preparation. Whatever opinion may be held regarding proprietaries in some quarters, we think it right to say that "Beecham" has not yet been recognized as an ailment. Several competitors were evidently unable to find ailment-named remedies in the *Diary* advertisement pages, and one gentleman went so far as to say "there are none." However, the following voting shows that many careful seekers found what they sought:—

Bile beans (p. 525).....	98
"Daisy" headache-powders (p. 526).....	42
Doan's backache and kidney pills (p. 524).....	36
Fenning's fever curer (p. 399).....	23
Cough lozenges, mixtures, &c.	20
Blair's gout pills (p. 389).....	18

Dr. Mackenzie's catarrh-cure (p. 400), Antibilious pills (pp. 345, &c.), Potter's asthma cure (p. 174), Liver pills (ii), Bishop's gout varalettes (p. 530), Sawyer's tic-powders (p. 520), Chocolate worm-cakes (p. 353), Antispasmodic throat pastilles (pp. 281, &c.), Binblow asthma-cure, &c., are others that are mentioned under this head. "Bile" is thus regarded, by our voters at least, as an ailment.

The most popular "protected" article appears to be "Daisy" powders. Next in order of popularity come Elliman's embrocations, Allenbury's preparations, Fenning's preparations, Collis Browne's chlorodyne, "Erasmic" soap, Farina eau de cologne (gegenüber dem Jülich's Platz), "Iron-ox" tablets, Powell's balsam, Calvert's carbolic tooth-powder, Beecham's pills, Vinolia preparations, Sanitas, Hommel's hæmatogen, Potter's asthma-cure, Maltova, Atkinson & Barker's preservative, Bishop's varalettes, Cook's soaps, Wright's liquor carbonis detergens, Camwal waters, Armour's beef-juice, Scrubb's ammonia, and Edgar's croup-lotion.

THE AWARDS.

Only one competitor has answered all six questions correctly. We therefore award four guineas to

Mr. F. M. WILSON, IPSWICH STREET, STOWMARKET.

Thirteen others have guessed five correctly, so to each of the following we will send 5s:

Mr. D. S. C. Reid, St. John's House, Blackburn.
Mr. G. Robertson, c/o Mr. R. F. Hughes, Chemist, Methil, Fife.
Mr. A. McGinnis, Evelyn Street, Manver's Street, Nottingham.
Mr. A. T. Reoch, 55 Hawkhill, Dundee.
Mr. W. G. Wells, 41 Stone Street, Maidstone.
Mr. Lennox Tice, 68 Kennington Oval, S.E.
Mr. Arthur E. King, c/o Messrs. Fuller & Co., Norwich.
Mr. A. Norweb, 26 Fisher Gate, Nottingham.
Mr. A. W. Campsall, 92 Broad Street, Parkgate, Yorks.
Mr. J. J. Wilson, 393 Oxford Street, Manchester.
Mr. W. J. Snow, The Pharmacy, Caterham Valley, Surrey.
Mr. G. A. Hebblethwaite, 69 Church Street, Drypool, Hull.
Messrs. Black & Co., 16 New Steine, Brighton.

The awards in the Colonial section will be announced later.

ACCORDING to a recent Customs decision, tincture of opium, to be used for medicinal purposes, and corresponding with that specified in the Japanese pharmacopœia, may be imported into Japan upon payment of duty at the rate of 10 per cent. *ad valorem* under No. 136 of the Tariff—"all other drugs, chemicals, and medicines."

ANTIDOTES ON POISON-LABELS.—"Tit-Bits" commends the idea of a correspondent to that snippy publication, who suggests that the labels of all bottles containing poisons should give the proper antidote for use in case the poison is accidentally taken by a human being. "No doubt many lives are sacrificed in such cases," says "Tit-Bits," "from ignorance of the proper antidote to administer; and it would be an excellent thing if our correspondent's idea were to be generally adopted."

London Chemists' Association's First Dinner.

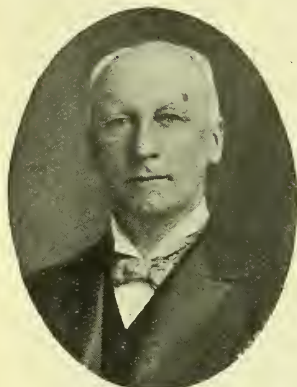


Photo. J. Russell & Sons.

MR. THOMAS LOUGH.

M.P. for Islington W. He is an Irishman, and has written sympathetically on Irish affairs. Mr. Lough is in the tea-trade.



MR. T. H. W. IDRIS, L.C.C., J.P., F.C.S.

Mayor of St. Pancras, Chairman of Idris & Co. (Limited), President of this Association and of the British Pharmaceutical Conference.



Photo. Elliott & Fry

SIR M. M. BHOWNAGGEE,

M.P. for Bethnal Green, N.E. He was born a Parsee in 1851, and began life as a journalist, subsequently becoming a barrister.

THIS Association is to be congratulated on the very successfully organised dinner which was held at the Hôtel Cecil on January 26. It is the first time that a pharmaceutical dinner has been graced by the presence of so many members of Parliament, a fact which all will recognise is of extreme importance at the present moment when the Pharmacy Bill is to be immediately re-introduced. The eight M.P.'s present were Sir M. M. Bhownaggee, K.C.I.E., Mr. R. K. Causton, Mr. Henry Kimber, Mr. Thomas Lough, Mr. William O'Malley, Mr. E. R. P. Moon (St. Pancras), Mr. T. H. Robertson (South Hackney), and Sir Albert Rollit. Amongst others present were Messrs. J. W. Bowen, R. Feaver Clarke, C. Coutts Michie, F. Harvey, J. Houlding, W. Lamond Howie, J. H. Hugill, F. Harwood Lescher, E. Linstead, T. H. Powell, F. A. Rogers, A. H. Solomon, Charles Umney, Weld, and W. Watson-Will.

There were present between 100 and 150 diners, a noticeable feature being the large proportion of retail chemists and those having direct trade interests. The dinner was held in the handsome Victoria Hall, the space at disposal allowing plenty of room to be allotted to the guests. The head table presented a noticeable appearance, the Chairman (Mr. T. H. W. Idris) being flanked on either side by M.P.'s interspersed with responsible chemists. It goes without saying that the opportunity was not lost of putting the parliamentary representatives in possession of all the facts bearing on the issues of the Pharmacy Bill. The chairmen of the spur tables Messrs. C. J. G. Bunker, John C. Umney, F. W. Truman, and G. P. Pond.

The dinner—an excellent one—being over, the loyal toasts were gone through, after which The Chairman proposed the toast of

"THE HOUSES OF PARLIAMENT."

Mr. Idris, after referring to the presence of so many members of Parliament, said that in the pursuit of their calling chemists are constantly having to face facts that bring home to them the grave dangers to the public that result from the present interpretation of the Pharmacy Acts. When the apothecary of former days became a medical practitioner, and ceased to deal in drugs, the chemist and druggist came into existence, and in the early and middle periods of the last century many attempts were made in the interests of public safety for regulating his calling (instigated largely by notorious cases of criminal and accidental poisonings), without much success; but in 1851 the Arsenic Act was passed, and Mr. Jacob Bell's Pharmacy Bill was introduced. This Bill became law in 1852, but it did not do much more than protect the title

of pharmaceutical chemist. Many Bills were introduced after that period by the Government, by the medical profession, and by societies of chemists with a view to dealing with the matter. After considerable discussion in both Houses, the Pharmacy Act in 1868, officially described as "an Act to regulate the sale of poisons, and alter and amend the Pharmacy Act, 1852," became law. He did not think anyone could object to the principle laid down in the preamble of that Act, which says: "Whereas it is expedient for the safety of the public that persons keeping open shop for retailing, dispensing, or compounding of poisons, and that persons known as chemists and druggists should possess a competent practical knowledge of their business." The Act provides: (1) That no unqualified person shall call himself chemist and druggist; (2) that no unqualified person shall keep open shop for the sale of poisons; (3) that no unqualified person shall sell a poison; (4) that no person shall sell a poison except in accordance with the poison regulations laid down by the Society with the approval of the Privy Council. The Act does not interfere with the use of poisons in the arts and manufactures, except to the extent of labelling with the name of the article and the word "Poison." In 1890 the Courts laid down that when the Act says no unqualified person shall sell,

IT MEANS THE PERSON

who does the physical act of selling, although up to that time the seller for all the purposes of the Act was deemed to be the person on whose behalf the sale was made, and who in the seventeenth section was made responsible for the proper labelling of the poison with the name and address of the seller, &c. Many important judicial decisions have been given in cases arising out of the Act which appear to nullify the intention of the framers of the Act and of Parliament, the chairman particularly referring to that of the Pharmaceutical Society v. The London and Provincial Supply Association in 1880. In this case the House of Lords ruled that, whereas Sections 1 and 15 of the Act said no person, unless registered, shall use the title of chemist and druggist, &c., or keep open shop for the sale of poisons, it did not say that no company should do these things. The Judges decided that the word "person" did not include a corporate body, although Lord Justice Bramwell in his decision said:

If the servant or shopman of a corporation sells poison, not being a pharmaceutical chemist and registered under the Act, it will be no answer to an action for the penalty to say that he did it as servant, whether of an individual or a corporation not qualified. If the act is in itself unlawful, it is not the less so



Photo. Elliott & Fry.

MR. HENRY KIMBER.

M.P. for Wandsworth. He is a retired solicitor, and a director of the Capital and Counties Bank.



MR. R. B. BETTY, Ph.C.,

Secretary of the L.C.A.

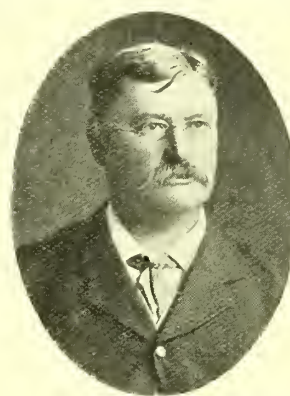


Photo. Elliott & Fry.

MR. W. O'MALLEY.

M.P. for co. Galway (Connemara). He is a journalist, and married the sister of Mr. T. P. O'Connor, M.P.

because done as a servant. If it would be lawful because the servant was qualified though his employer was not, I think the Statute is shown to be all the more reasonable, as in that case a corporation is on the same footing as a partnership, and there is no reason why it shall not be. It may be asked how is the "keeping open shop" to be reached; the servants do not keep it open. No; but the directors or managers do—they are the offenders in that case. I cannot see how they could deny that they kept open that shop. They do, they do it in fact. If they committed a public nuisance by smelting, vapours, or otherwise, in the preparation or (if supposable) in the sale of their drugs, they, and not the corporation, would be indictable.

Lord Justice Thesiger added:

But I feel bound to add that I am by no means satisfied that, although a corporation as a separate entity be not liable to the penalty which is sought to be recovered in this case, the individual members of the corporation, whether directors of a company or otherwise, may not be liable, and thus the mischief be remedied.

Since that decision the apparent intentions of Parliament have been largely set at naught. Men who have failed to pass examinations or have been prosecuted for selling poisons, have, in many cases, evaded the Act by forming small limited companies, and doing everything that appeared to be prohibited by the Act. Attempts have also been made by interested persons to lessen the restrictions on the sales of dangerous proprietary preparations of poisons on the plea that the Pharmacy Act provides a monopoly for chemists. The monopoly theory will not hold water. From experience the Chairman said he was able to affirm that but for the distinction it gives the shop of a qualified chemist from that of the unqualified vendor of drugs, chemists would greatly prefer to be without the business of selling poisons; it involves heavy responsibilities, is a source of great worry, and affords very little profit. The facts connected with that free trade in poisons agitation have been exposed by proceedings in the law courts, and condemned by all persons qualified to judge, especially by medical men and coroners. The Pharmacy Act has worked well, with a minimum of inconvenience to the public. It has been used as the model for legislation in Ireland and all the Colonies. But the Act greatly requires strengthening. At present a company consisting of seven or more unqualified men may do as a corporate body what the State would trust none of them as individuals to do. They can call themselves chemists, they can keep chemists' shops, where deadly poisons are stocked and sold. They do not break the law if they have a hundred such shops where poisons are sold every day, and

EMPLOY NOT A SINGLE QUALIFIED MAN.

Mr. Idris then went on to explain that many of the present defects in the law can be met by a Pharmacy Bill prepared by the Pharmaceutical Society, and introduced by Mr. Lough in the last Session of Parliament. After explaining the provisions of the Bill, the speaker said the only opposition to the Bill comes from limited companies controlled by unqualified

people who object to being placed, in relation to the Pharmacy Act, in a position as similar as possible to that of an individual, and who are now free from the restrictions so necessary for the public safety. The Bill is being supported by the medical profession, and will probably meet the expressed wish of the Lord Chancellor. Clause 7 was pointed out as an honest attempt to bring companies into line with individuals. If it were enough that one of several directors should be qualified there would not be the slightest difficulty in appointing a dummy director who would have nothing really to do with the control of the business. It is essential to the safety of the public that they should have trained men in charge of chemists' shops. This point was further pressed home, and the hope expressed that the matter would receive the careful attention of Parliament, and especially of those members of the legislature who were present. (Cheers.)

Mr. R. K. CAUSTON, M.P. (Southwark, W.), in reply, said that all parties in the House of Commons were represented at the dinner, and it was a pleasing feature that, whatever differences of opinion there might be in the House, these disappeared when chemists dispensed hospitality in the same way as they (the chemists) did medicine. (Laughter.) He (the speaker) had been glad to listen to such an able and businesslike speech as that of the Chairman—(hear, hear)—and when he heard that Mr. Lough was entrusted with the Pharmacy Bill, he could assure those present that the Bill would not fail to pass from want of energy. (Hear, hear.) Mr. Lough would force the Bill through if that were possible. (Cheers.) He was bound to add, however, that in the case of a Bill of such public importance it could only be got through by the responsible Government. He (the speaker) had listened with pleasure to the Chairman's speech, as he had never had an opportunity of hearing the question stated in so clear a form. Mr. Causton next alluded to the "long and frequent meetings of the Cabinet"; he did not know what they meant, whether immediate dissolution, personal squabbles or war—there were all sorts of rumours about which it would be best to have dispelled at the earliest possible moment. The speaker next alluded to his long friendship with Mr. Kimber (who was also to reply to the toast), adding that, although on opposite sides of the House, they were united on practical and business questions such as the Pharmacy Bill. (Cheers.)

MR. H. KIMBER, M.P. (Wandsworth) also replied, beginning his speech with some good-humoured banter at Mr. Causton, his friend of forty years' standing. He considered that to endeavour to relegate to him the response for the House of Lords was the unkindest cut of all. How could he possibly reply, he complained, for a House to which he never belonged, never would belong, and never aspired to belong to. (Laughter.) Mr. Causton himself, continued Mr. Kimber, was much more likely to belong to the Upper House for he had been a member of the Government. (Laughter.) And it was a Radical Government, too, which always seemed to him to get its members into the Lords much easier than

was the case with the Conservative party, to which he belonged. The House of Lords existed, in his opinion, for the purpose of putting vetos on the acts of the Commons. The House of Commons was practically the King of the country, and he belonged, in his opinion, to that vastly superior body—(laughter and applause); therefore he did not see why he should answer for the Lords. Now the King (as represented by the Commons) had 670 distinct minds; it was not surprising, therefore, that his conduct should be occasionally vacillating. There were so many different topics to be taken up, and so many different ways of looking at them. The subject of their grievances, which the Chairman had so well explained to them in his excellent common-sense speech, was a difficult one to treat in the House of Commons. They must not forget the competition which their subject had with so many other subjects, all of equal importance to their promoters. And seeing that the subject has to be treated in the House of Commons, as though by one man, it will be evident that no subject whatever can be treated without time. Members of Parliament find it more and more difficult every week to get attention paid to local subjects in which their constituents are interested. This is not surprising if we consider the growth of Empire and the additional influence and power to which this country has attained. When Parliament reassembles next week, there will be perhaps over 100 of what members usually call "fad" Bills—(Mr. Lough: "No! No!")—so that chemists must have patience if they desire parliamentary legislation. He thanked the Association for inviting him to be present at their dinner, and the Chairman for the lucidity of his speech. (Applause.)

Mr. T. LOUGH, M.P. (Islington, W.), proposed the toast of

"THE PHARMACEUTICAL SOCIETY."

Mr. Lough, who was received with prolonged cheers, briefly reviewed the functions and doings of the Pharmaceutical Society in a manner which showed more than a casual acquaintance with the subject. The Society, he added, is a sort of fairy godmother for all chemists in the land. The Society looks after chemists, and the chemists look after the Society. He (the speaker) had a great respect for chemists, and associated modern chemists with the old apothecary of his younger days. He considered that all the good attributes of the old apothecary had descended to the chemist of to-day. The old apothecary always presented a beaming face to the world, and looked with the greatest pleasure on all the mortals who came into his shop. (Laughter.) The blue and red bottles of the chemists' shop are the most delightful features of the streets of the metropolis. Mr. Lough then gently twitted the Chairman for his defence of the trade, giving a rather gruesome Irish anecdote to illustrate the point. Chemistry, continued Mr. Lough, treats of the composition of substances and the changes they undergo. All parliamentary parties are substances liable to change, and hence it is that even such an important bill as the Pharmacy Bill has no chance of passing into law unless the proper effect is produced on those substances. He (the speaker) had never had an opportunity of making a speech on the Bill in the House—(laughter)—but, shortly stated, the object of the Bill is simply to place corporate bodies in the same position as individuals. Recently, important decisions on the powers of corporate bodies had been brought about in labour questions, and in restricting the powers of corporate bodies there was the tendency to err on the other side and decline to entrust them with duties usually performed by individuals. The trouble in pharmacy has all arisen through the omission of the letter "s." Where the Act states that a person shall not be entitled to sell poison or, in the case of dentists, draw teeth, it should have been "person or persons." The framers of the Act were simple people who lived in archaic times before the Flood. The Legislature thought that these operations would only be performed by individuals. He understood that a servant-girl in Kent had now formed a company to carry on pharmacy, and the question naturally occurred, Why should companies be allowed to do those things that were denied to an individual? This is the difficulty which chemists are striving to regulate. In proposing the prosperity of the Society, he would like to add that the Society had the recognition of the Legislature.

Mr. CHARLES UNNEY said he had attended many pharmaceutical dinners in his time, but on no previous occasion had he had the pleasure of dining with so large a percentage of

"live" members of Parliament. He had voted for his friend Mr. Causton for many years, until the law stepped in and, because he was the managing director of a company, said he should vote no longer. Through the fact that the "law was a hass," he could see many votes lost in a similar manner for Mr. Causton. With regard to the Pharmaceutical Society, there are many good things in connection with it. They have a series of scholarships, founded by men who have been great benefactors of the Society, and so plentiful have these scholarships become that often there are no students to take them up—a state of affairs which he is totally at a loss to comprehend. His experience as a member of the Board of Examiners led him to affirm that in the early seventies the chemists who passed the examinations were well qualified to compound medicines and to retail poisons. At the present time they are even better qualified, as the examinations nowadays are much more severe. The Benevolent Fund is likewise doing a great and good work. He was not there as an out-and-out defender of the Society; but, speaking generally, he thought they spent their money and carried on their work thoroughly well. Doubtless they had made mistakes. In his opinion, they had missed a great opportunity when the Sale of Food and Drugs Act was being passed. By that Act the chemists of the country had been harassed very considerably, and the Society might have been the means of ensuring better protection for chemists if they had interfered at the time. He was pleased to think that the Society in recent times was moving in the direction of retracing lost steps. He hoped all the members of Parliament who honoured them with their presence that night would give the case for the chemist, put so ably by their Chairman, their earnest consideration and their support. (Applause.)

Mr. W. O'MALLEY, M.P. (Connemara), in proposing

"THE LONDON CHEMISTS' ASSOCIATION,"

said the eloquent speeches he had listened to made him begin to think that poison was not such a bad thing after all. After the expository speech of the Chairman, and after learning all about the organisation of the Society, he felt bound to say that the objects chemists had in view have his sympathy and would have his full support. ("Hear, hear," and applause.) He had been told that there were about two thousand chemists in London, and although that gathering only represented about 25 per cent. of that number, he thought that could be put down to the short time the Association had been established, and he congratulated the Association on their inaugural dinner. From the speeches and the enthusiasm he gathered that they were in earnest, but he warned them that it might be some years before they got what they wanted. He wished particularly to point out the necessity for organisation. As a member of the Irish party, he was a fairly good judge of the influence organisation has on the House of Commons. (Laughter and applause.) Individually chemists are weak, and unless they unite their grievances will remain unredressed. He congratulated the Pharmaceutical Society of securing the services of so able and distinguished a member of the House as Mr. Lough. The other night the Duke of Connaught paid high tribute to the marked ability and genius of the Irish people, and after Mr. Lough's speech all would admit, he thought, that that praise was not misplaced. But eloquence was not everything, and he found that marching through the lobbies wearing shoe-leather was sometimes more effective than eloquence. Than Mr. Lough there was no man more determined to fight a subject which he took in hand to the bitter end, and he would promise him that he would give him all the support he could for the Pharmacy Bill. (Great applause.) Every member of Parliament knows the difficulty of getting a private Bill through Parliament, and he thought they were labouring under a delusion if they imagined it would go through next Session. He thought it scarcely probable that the Cabinet, at their recent meetings, were considering the Pharmacy Bill. (Laughter.) It probably would not be obtained without years of effort. He himself had charge of an Irish Poor Law Bill, and he had tried over and over again to rush it through about twelve o'clock—(laughter)—but there was always some one who got up and said "I object." This Poor-law Bill had the support of nearly all the Irish members, those in the North of Ireland included, simply because the Poor-law Association, promoting the Bill, is so well organised that every member of the party was daily receiving telegrams or

letters urging his support of the measure. The Association continues hammering away at the subject, keeping all the members well posted, and the result will probably be that the Government will be forced to take up the Bill. "It is well to remember, therefore," concluded Mr. O'Malley, "that you will not get your Bill through by the eloquence of Mr. Lough alone, even with the support of Mr. Kimber and Mr. Canston, but their efforts must be accompanied by persistent and powerful agitation on the part of the Association. Of course, to ensure that, it is not necessary to have recourse to violence—(laughter)—but all the influences possible ought to be brought to bear upon members of the House." He thanked the Association for inviting him to be present, and said if it was the first dinner of the Association at which he was present it would not be his fault if it were the last. (Laughter and great applause.)

Mr. W. S. GLYN-JONES, replying, said the outstanding feature of the last decade in pharmacy had been the growth in numbers and importance of local associations. It was about time, therefore, that the metropolis should follow suit, and if the London Chemists' Association had done nothing else but bring together that gathering to listen to such a speech as the Chairman had delivered, and to give those members of Parliament present an opportunity of hearing so explicit a statement of the grievances of chemists, it had justified its existence. He was grateful to Mr. O'Malley for the hint he had given of how they work things in Ireland when Parliamentary legislation is required. He thought that chemists, however, were beginning to learn the lesson that "Nothing comes to those that don't fetch it." The Association could do work such as the statutory body perhaps could not do. They could deal with the tiny difficulties that beset the path of the chemist on the business side of his calling, and could adjust those small things which, though matters of not very great importance to one individual, become serious when massed in the aggregate. Then the bigger difficulties of getting legislation through Parliament only an organisation like theirs can carry out. The chemist is generally an animal of isolated habits. This is primarily due to the fact that the public keep his nose to the grindstone from eight in the morning till eight or later at night, and they run from one shop to another to get a teething-powder a halfpenny cheaper. Associations tend to remedy these evils by bringing chemists together. The strong men help the weak men, and association gives the strong man sometimes a less bad opinion of his weaker brother. It had been complained that London was too huge to deal with in one Association, and he recalled the fact that a newspaper enterprise was attempting to localise its daily paper so that the whole of the metropolis might be equally served. He did not complain of Mr. Stead taking a leaf out of the book of the London Chemists' Association—(laughter)—but he thought these were the proper lines to work on. The Association seeks to make better chemists, better citizens, and better men of its members. He desired to thank the Western Chemists' Association for the help they had given in establishing the London Chemists' Association, and the President of the Association (Mr. J. W. Bowen) for his presence there that night. (Applause.)

Sir M. M. BROWNAGGREE, M.P. (Bethnal Green, N.E.), proposed the toast of

"THE CHAIRMAN,"

and, after referring to Mr. Idris's popularity, spoke of the Pharmacy Bill. When Mr. Burton wrote to him about the Bill he (the speaker) was no stranger as to the objects of the Bill. His attention had been called to it by both friends and opponents, and he had made it a point to study the provisions of the Bill. Without going into details, he thought there was no difficulty in expressing his approval of the general principle upon which the Bill takes its stand. It is absolutely congenial to his ideas that the important body of chemists should seek to be protected against the unfair competition of limited companies. (Hear, hear.) The Bill is in safe keeping in the hands of Mr. Lough—(applause)—who is one of the most eloquent and persistent members of the House of Commons. (Hear, hear.) One of the previous speakers had expressed grave doubts as to the immediate passage of the Bill, but the way is to go on agitating till the passage of the Bill is secured. Another way of bringing about reform would be to pass an amending Act that the

word "person" means also "persons." He remembered a case where an Indian university found their statutes would not admit women to the university degrees, but the difficulty was promptly got rid of by the passing of a by-law that the pronoun "he" shall mean "she." It has often been remarked that a good way of getting railway grievances remedied is to kill an M.P. Now, if by dispensing prescriptions unqualified persons brought about the untimely deaths of a few M.P.s—(laughter)—the grievances under which chemists laboured would be attended to. Again referring to the good qualities of the Chairman, Sir M. M. Brownaggree added that if Mr. Idris had done nothing but deliver his speech in defence of chemists it would have been ample justification to have designated him "an ideal chairman." (Applause.)

The CHAIRMAN briefly replied, making racy comments on the previous speeches, which were received with the utmost good-humour.

After the applause had subsided, the Chairman called on Sir ALBERT ROLLIT, M.P. (Islington, S.), to propose the toast of

"THE PRESS."

Sir Albert said that in regard to the Pharmacy Bill he would do his best to support it, as it is right in principle, and he hoped it would be carried to a legislative conclusion. If he could be of any service to advance the professional interests of chemists he should be pleased to do so. The speaker also referred to the discovery of radium by M. and Madame Curie, and showed an intimate knowledge of the problems which the discovery has raised.

The editor of THE CHEMIST AND DRUGGIST briefly replied.

The proceedings then closed by the singing of the National Anthem. During the evening an excellent musical programme was gone through, the arrangements being made by Mr. Sydney Jamieson, Mr. W. J. Talintyre presiding at the pianoforte.



"What did you come down in, old man?"
"The natural orders of bile-beans and fig-syrup."

Radium.

"A great part of London is built on radium."—*Daily Paper*.
If radium the Metropolis
Contains, as said by some,
Beyond the four-mile circuit is
Outside the radium.
"F. D. H." in the "Westminster Gazette."



TO CORRESPONDENTS.—Please write clearly and concisely on one side of the paper only. All communications should be accompanied by the names and addresses of the writers. If queries are submitted, each should be written on a separate piece of paper. We do not reply to queries by post, and can only answer on subjects of general interest.

Searl's Test for Yeast-extract.

SIR,—I have read with considerable interest the reports of the recent case heard in Liverpool in reference to meat-extract adulterated with yeast-extract, and the correspondence following thereon. I have examined a fair number of extracts, both meat and yeast, and also mixed extracts, and I can support all that Mr. A. Searl says in his letter in your last issue. I have found that the precipitate is so characteristic with yeast-extracts that it could not possibly be confounded with the small and finely divided precipitate that one sometimes obtains even from pure meat-extracts. With most yeast-extracts the amount of this precipitate is sufficiently definite to allow at least a good opinion to be formed as to the extent of the adulteration, but with marmite I have found on several occasions that the results are far less typical than with other preparations. It is possible that something takes place in the manufacture of the last-named which differs from the usual method of preparation; at all events, the reaction is an excellent qualitative one, and under most conditions, when carried out carefully and with scrupulous regard to detail, it may be of great assistance from a quantitative point of view. The practical value of the reaction has certainly been demonstrated by the fact that only just before this test was devised several cases came before me personally in which yeast-extracts had been sent to public analysts unmarked, and were reported upon by them as pure meat-extract. But directly after this test had been published, and public attention called to the matter, an enormous quantity of the adulterated product was withdrawn from the market, and proceedings under the Sale of Food and Drugs Acts were instituted.

The final report of the Royal Commission on Arsenical Poisoning has shown a very serious danger connected with the consumption of yeast-extract; four different samples of the brand were found to contain from $\frac{1}{20}$ to $\frac{1}{5}$ gr. of arsenic per pound ("Lancet," December 19, 1903).

208 High Street, S.E.,
January 23.

Yours faithfully,
ERNEST J. PARRY.

Irish Pharmacy Companies.

SIR,—I have read the discussion of the Irish Pharmaceutical Council, and think it is time something was done to prevent grocers, &c., opening medical halls. I think chemists as a whole are to blame for the present state of affairs, as they are legion compared with the companies so far. Any other profession considers it degrading for licentiates to work for an unqualified person, and I understand they would be struck off the roll. Why does not the Registrar keep a list of all legitimate chemists, and print it for the benefit of any assistant who wished to apply for it? An employer, also with an appropriate list, could trace with certainty if a candidate had been with a company, and if so religiously reject him. It is only a matter of a little combination among the chemists, and they are bound to eat the companies out in a short time. They cannot take apprentices, and they cannot proceed without assistants, who are bound to know their doom if they enter their services. See how the dispensary doctors are pushing their claim, simply because they combine and boycott a brother chip who does not fall in with their rules. No doubt there would be cries of want of assistants and temptations to employ those who have broken the rules; but these unworthy assistants could be done without if they never existed, and there will be plenty to fill all hands when there is no illegitimate outlet for them. It would pay both the employer and employed much better in the near future in very many ways. Finally, I would transfer any chemist to the black list who employs a company's assistant. A SUFFERER. 23/14.)

A Busy Day.

The manager (21/39) to a well-known firm of pharmaceutical chemists in South London writes to tell us of a busy day they had one day recently. They had advertised that they would give away 5,000 sample bottles of their cough-remedy on that day. A week previous to distribution they covered the window with advertising matter, filled up the bottom with samples, and then billed the neighbourhood. Preparations were made for a busy day, and four or five assistants were on duty. About 11 A.M. the rush began, and continued without a break until about 2 P.M. The shop was uncomfortably packed during those hours, and many people were unable to get in. From 2 P.M. until about 5 P.M. there was a lull, but the usual dinner and tea hours had to be given up, and the assistants snatched a bite when they could from the liberal supply of food provided by the firm. About five o'clock the attack of customers was renewed with increased vigour, and continued until about 8 P.M., when the samples gave out. Although a notice was placed in the window to that effect, the staff were kept fully employed until closing-time, when they found that they had served during the day 5,720 customers. Although it would have been no difficult matter to have given away this number of samples indiscriminately to all who asked for them, they were given to customers only. Is this a record?

An Offer of Goods.

A provincial correspondent (19/30) sends us a written offer of goods from a man whose address is a newspaper-shop, and whose identity cannot be determined. We reproduce a portion of the offer, which speaks for itself:

1 lb Aloin 4/- 5/-
1 lb P. Rhin Opt 4/-
Hyd Oxid Rub } 4/0 lb
do }
2 lb Ostr. pine Oulph 14/- 3
2 lb Santonin 19/- lb
1 lb Cocaine pur Alkaloid 20/- 3
18 x 1 gr tubs Sacrina Oulph 9/- per gram
8 lb Chd Iodid Rub 7/- lb
2 lb Carmine Opt 7/- 3
1 lb Caffeine Hydrobrom 8/- 3
4 lb P. Iodoform 7/6 per 4 lb
1 lb orig Phenalgine 3/9
1 x 25 gram (orig) Citrophem 1/9
3 x 1/2 orig Papain Snickers 3/- 3
2 x 1/2 " " 1/9 3

Letters in Brief.

SULPHOBENZOATE OF SODIUM.—Mr. Herbert Bridges (Norwich) writes, in reply to Dr. Hugh Woods' letter of last week, but as Messrs. Hopkin & Williams (Limited) now have the matter in hand it will be well to leave them to settle the doubt as to the constitution of "sulphobenzoate of sodium" which has been raised by Mr. Bridges.

INTERVIEWS re SITUATIONS.—28/31 wants to know, if a firm sends for a man for a personal interview, whether it is not the usual and a recognised custom to pay return railway-fare?

Miscellaneous Inquiries.

16/61. *Lux*.—(1) Rangoon Oil is a crude petroleum. (2) Acetic acid of the sp. gr. of 1.044 (at 15° C.) contains between 32 and 33 per cent. of acetic acid; of the sp. gr. of 1.040 it contains 2.9 per cent.

14/24. *C. H. C. F.*—(1) The Strength of Vinegar is denoted as No. 18, 20, 22, or 24, the numbers depending on the fact that an ounce of the fluid will neutralise 18, 20, 22, or 24 gr. of dry sodium carbonate. The percentage of real acetic acid is found by multiplying the number by 0.259, No. 24 thus containing 6.22 per cent of acid. (2) It is not legal to sell diluted acetic acid as vinegar.

28/18. *Medicaf.*—(1) Poultry-spice :

Powdered fenugreek	...	...	5iv.
Powdered ginger	...	...	5iv.
Powdered gentian	...	...	5iv.
Powdered coriander	...	...	5iv.
Powdered locust-beans	...	...	lb. j.

Mix.

(2) *Egg-producer* is similar to the above, but contains whiting and pepper.

22/73. *Eggs.*—Commercial silicate of potash-solution is alkaline, this making the silicate more soluble. Alkalinity would not be permissible in microscopic mounting.

22/34. *J. M. L.*—Jabez Hogg's "The Microscope" (Routledge), 10s. 6d., is the book that will suit your requirements.

22/42. *Station.*—Books on Dogs.—J. W. Hill's "Management and Diseases of the Dog," 7s. 6d. (Sonnenschein), and Dalziel's "Diseases of the Dog," 1s. (Upcott Gill).

23/9 (*Pop*) and 16/29 (*Pyro*).—We must refer you to back numbers for recipes for combined toning and fixing baths, and concentrated toning-solution.

23/2. *Gelt.*—The best, and most dangerous, Serpents' Eggs are made by massing mercuric sulphocyanide, previously coloured green or blue with tragacanth paste, rolling into pills, and drying.

22/67. *F. R. T.*—Prepared chalk is usually taken as the representative of oyster-shells when that ingredient is ordered in family recipe.

28/21. *E. R.*—After-shave Lotion.—In place of bay-rum you could make a cheap eau de Cologne for bathing the face after shaving. It is the spirit that acts as the cooling application, which makes it obvious that the lotion would not answer the purpose if that ingredient is immoderately reduced.

19/56. *G. Co.*—(1) Artificial Cherry-essence :

Oil of orris	...	...	...	℥lxxx.
Essence of vanilla	...	...	...	3iiss.
Essence of almonds	...	...	...	5iv.
Butyric ether	...	...	...	5ij.
Acetic ether	...	...	...	5j.
Rectified spirit to make	...	...	...	5xx.

Mix and colour with an aqueous solution of magenta.

(2) Walnut-essence :

Oil of bitter almonds	...	...	...	5j.
Oil of cognac	...	...	...	5j.
Essence of vanilla	...	...	...	5j.
Aldehyde	...	...	...	℥lxxx.
Tincture of orris	...	...	...	5ij.
Rectified spirit to make	...	...	...	5xx.

Mix.

8/40. *A. G. R.*—The cracks on the tips of the fingers probably refer to a rather intractable form of eczema, for which suitable constitutional treatment will be necessary for permanent cure, but the following general hygienic directions may assist in giving relief. The dietary ought to be carefully regulated, a light diet being chiefly indicated, and accompanied by the restricted use of alcoholic stimulants, aerated non-alcoholic drinks being freely taken instead. The hands should not be exposed to sudden alterations in temperature. Superfatted soaps should be employed to wash the hands, which afterwards should be rendered thoroughly dry. The frequent use of the tepid bath should be indulged in, and followed by superficial massage, as the whole skin ought to be made to act freely. Hamamelis-essence ointment might with advantage be used to lubricate the fingers, and gloves should be worn in bed.

19/54. *J. B.*—We do not analyse and report upon the quality of drugs. You could examine the sample of cream of tartar you send by shaking up 10 gr. or so in $\frac{1}{2}$ oz. of distilled water, filter, and to the filtrate add a few drops of barium-chloride solution. The precipitate should dissolve completely when hydrochloric acid is added. If not, the sample is likely to contain potassium-acid sulphate. Test also for ammonium-acid phosphate.

Information Wanted

27/24. What is pyrocarbide? or where obtainable?

26/33. Who are the makers of the "improved 100-hour patent glow night-lamp"?

29/34. Who are English agents for Hartman's atomizer, made by the Riverside Rubber Company, Belleville, N.J.?

Coming Events.

Notices for insertion under this heading should be received by the Editor on Wednesday of each week.

Monday, February 1.

Society of Arts, John Street, Adelphi, W.C., at 8 P.M. Cantor Lecture II., by Dr. J. Lewkowitsch on "Oils and Fats; their Uses and Applications."

Society of Chemical Industry (London Section), Burlington House, Piccadilly, W., at 8 P.M. Mr. Julian L. Baker will read "A Résumé of the Report, Minutes of Evidence, and Appendices of the Royal Commission on Arsenical-poisoning."

Tuesday, February 2.

Wakefield Chemists' Association, White Horse Hotel. Mr. F. P. Sargeant (Leeds) on "Division of the Minor."
Royal Photographic Society, 66 Russell Square, W.C., at 8 P.M. Mr. C. Winthrop Somerville on "Bromide-printing."

Wednesday, February 3.

Newcastle-upon-Tyne Chemists' Association, Hôtel Métropole, Clayton Street, at 8 P.M. Smoking-concert.
Pharmaceutical Society of Great Britain, 17 Bloomsbury Square, W.C., at 11 A.M. Council-meeting.
Pharmaceutical Society of Ireland, 67 Lower Mount Street, Dublin, at 3 P.M. Council-meeting.
Exeter Association of Chemists and Druggists, Palmer and Edwards' Restaurant, High Street, Exeter, at 8.30 P.M. Annual snpper. Tickets (3s. 6d. each) may be had from Mr. H. Wippell Gadd, 100 Fore Street, Exeter.
Wolverhampton Chemists' Association. Annual meeting.
Stockport Chemists' Association, Albert Hall, at 9 P.M. Monthly meeting.

Thursday, February 4

Röntgen Society, 20 Hanover Square, W., at 8.30 P.M. Discussion on the "Production of Photographic Reversal through the Action of Various Radiations."
East Aberdeenshire Chemists' Association, Station Hotel, Maud, at 2.15 P.M. Annual meeting and dinner. Mr. A. Gall, Fraserburgh, will occupy the chair.
Sheffield Pharmaceutical and Chemical Society. Annual ball. Tickets (7s. 6d. each) may be had from the Hon. Secretary, Mr. H. Antcliffe, Union Offices, Westbar, Sheffield.
Great Yarmouth Pharmaceutical Association. Monthly meeting.
Chemical Society, Burlington House, Piccadilly, W., at 8 P.M. The following papers to be communicated are: "The Tautomeric Character of the Acidic Thiocyanates," preliminary note by Mr. R. E. Doran; "The Resolution of $\alpha\beta$ Dihydroxybutyric Acid into its Optically Active Constituents," by Messrs. R. S. Morrell and E. K. Hanson.

MR. THOMAS TYRER, F.I.C., F.C.S., is to read a supplementary paper on the spirit question at a special meeting of the London Section of the Society of Chemical Industry on February 22. Mr. Tyrer will in this communication give the latest information respecting the use of duty-free alcohol for industrial purposes in various countries.

THE twenty-third annual Junior Pharmacy Ball is announced for February 24. Mr. Percival Trick, Salisbury House, London Wall, E.C., is the Hon. Secretary. Tickets, 7s. 6d. each.

THE annual dinner of the Westminster College of Chemistry and Pharmacy has been fixed for February 15.

Trade Report.

NOTICE TO BUYERS.—The prices given in this section are those obtained by importers or manufacturers for bulk quantities or original packages. To these prices various charges have to be added, whereby values are in many instances greatly augmented before wholesale dealers stock the goods. Qualities of drugs and oils vary greatly, and higher prices are commanded by selected qualities even in bulk quantities. It would be unreasonable for retail buyers to expect to get small quantities at anything like the prices here quoted.

42 Cannon Street, London, E.C.: January 27.

THIS report deals with the markets up to Wednesday evening. Later intelligence, including the result of the Amsterdam Cinchona auction, will be found in our Coloured Supplement.

There is little of interest to note in the drug and chemical markets this week, business being quiet all round. Morphine has been in more active demand for export to Japan, and makers have taken the opportunity to quote prices strictly net in future. Refined camphor continues to be firmly held, and in Japanese tablets a large business has again been done at higher prices. Essential oils are all quiet, including peppermint. Patchouli-oil has advanced, owing to the scarcity of good raw material. Cascara-sagrada remains firm, and any alteration is likely to be in the direction of higher prices.

Arrivals.

The following drugs, chemicals, &c., have arrived at the principal ports of the United Kingdom from January 12 to 18, inclusive: Acid, acetic (@ Rouen), 25; acid, boric (@ Antwerp), 5; acid, carbolic (@ Amsterdam), 15; acid, oxalic (@ Hamburg), 26; acid, tartaric (@ Rotterdam), 14, (@ Stettin) 4; annatto (@ Bordeaux), 5; argol (@ Cape Town), 53; arrowroot (@ St. Vincent), 536; arsenic (@ Hamburg), 10; "balsams" (@ Brazil), 21; bleaching-powder (@ Rotterdam), 54; buchu (@ Cape Town), 41; cinchona (@ Calicut), 145; cream of tartar (@ Bordeaux), 10; drugs (@ Philadelphia) 39, (@ Montserrat) 6; fennugreek-seed (@ Casablanca), 150; ginger (@ Jamaica), 8; gum arabic (@ Mogador), 8; lime-juice (@ Dominica), 46; menthol (@ Hamburg), 5; oil, castor (@ Antwerp), 12; oil, cinnamon (@ Marseilles), 10 cs.; oil, cod-liver (@ Aalesund) 60, (@ Bergen) 4; oil, lime (@ Dominica), 6; oil, olive (@ Seville), 187, (@ Bari) 33, (@ Malaga) 271; oil, orange (@ Bremen), 12 cs.; oil, peppermint (@ Hamburg), 25; oil, rose (@ Bombay), 4; oils, essential (@ Ostend), 26; oilbalm (@ Bombay), 215; pot. carb. (@ Calais), 5; pot. chlor. (@ Gothenburg), 20; pot. cyanide (@ Paris), 10; saccharin (@ Antwerp), 1; saffron (@ Valencia), 2 cs.; sandarac (@ Mogador), 8; sarsaparilla (@ Jamaica), 6; soy (@ Hong-Kong), 50; sugar of lead (@ Rouen) 35, (@ Stettin) 41; tartar (@ Bordeaux) 24, (@ Barcelona) 85, (@ Rotterdam) 95; tartar emetic (@ Hamburg), 20; turmeric (@ Bombay), 400; wax, bees' (@ Australia) 33, (@ Mogador) 4; wax, ceresin (@ Hamburg), 20.

The following drugs, chemicals, &c., have arrived at the principal ports of the United Kingdom from January 19 to 26 inclusive: Acetone (@ Fiume), 15 cks 69 drms.; acid, acetic (@ Terneuzen) 44 brls. 100 cbs., (@ Fredrikstad) 118 cbs., (@ Fiume) 70; acid, carbolic (@ Amsterdam), 50 cks; acid, citric (@ Bordeaux), 12; acid, sulphuric (@ Amsterdam), 70; acid, tartaric (@ Bari) 30, (@ Rotterdam) 10, (@ Antwerp) 20, (@ Bordeaux) 58; alum (@ Ostend), 10; aniseed (@ Consple.), 127; annatto-seed (@ Madras), 35; argol (@ Naples), 34; arsenic (@ Oporto) 260 cks., (@ Antwerp) 87, (@ Tréport) 44; benzoin (@ Singapore) 34, 35 *in tr.*; bleaching-powder (@ Rotterdam) 760, (@ Hamburg) 33; borax (@ Hamburg), 1,143 bgs.; Calabar beans (@ W.C. Africa), 34; camphor (@ Havre), 15 cs.; cardamoms 95, 221 *in tr.*; caraway-seed (@ Amsterdam), 117; cassia fistula (@ Amsterdam), 25 bskts.; chloral hydrate (@ Hamburg), 2 cs.; cinchona (@ Tuticorin) 50, (@ Mollendo) 31; cod-liver oil (@ New York) 75, (@ Aalesund) 2, (@ Bergen) 31; colocynth (@ Marseilles), 44; cream of tartar (@ Bordeaux) 58, (@ Marseilles) 48; cubebs (@ Singapore) 29; cuttlefish-bone (@ Marseilles), 36; drugs (@ New York) 75, (@ Trieste) 45; fennel-seed (@ Marseilles), 35; gamboge (@ Havre), 14 cs.; guinea-grains (@ W.C. Africa), 120; ipecacuanha (@ Hamburg), 44; juniper-berries (@ Leghorn), 267; kolas (@

W.C. Africa), 18; lead acetate (@ Tréport), 13; lemon-juice (@ Palermo) 35 pps.; lemon-juice, conc. (@ Messina), 10 pps.; liquorice-juice (@ Palermo), 20; menthol (@ Marseilles) 10, (@ Hamburg) 2, (@ New York) 10; oil, camphor (@ Hamburg), 31 cs.; oil, castor (@ Leghorn) 33, (@ Genoa) 50; oil, citronella (@ Galle) 8, 26 drms. *in tr.*; oil, lemon (@ Palermo) 20, (@ Messina) 24 $\times \frac{1}{2}$ cs.; oil, peppermint (@ Hamburg), 19; oil, rose (@ Bombay), 8 pots; oils, essential (@ Messina) 75, (@ Rouen) 12, (@ New York) 45, (@ Palermo) 15; oilbalm (@ Aden), 39; opium (@ Smyrna) 164 cs., (@ Consple. 25, (@ New York) 25; orris (@ Leghorn), 11; pot. chlor. (@ Tréport), 80; pot. oxalate (@ Rotterdam), 20; quillaia (@ Valparaiso), 215; roots (@ Havre) 30 bls.; rosemary (@ Marseilles), 3; saffron (@ Valencia), 3; sal ammoniac (@ Stettin), 85; sandarac (@ Mogador), 94; senna (@ Tuticorin) 289, (@ Bombay) 135, (@ Alexandria) 35; soda chlorate (@ Tréport), 60; sponge (@ Piræus), 129 cs. 35 pkgs.; tartar (@ Rotterdam) 60, (@ Bari) 309, (@ Bordeaux) 91, (@ Messina) 15; vanilla (@ Marseilles), 67 cs.; wax, bees' (@ Calcutta) 26, (@ Leghorn) 12, (@ W.C. Africa) 16, (@ Shanghai) 10 cs.; wax, ceresin (@ Hamburg), 31; wine-lees (@ Bari) 924 bgs., (@ Palermo) 390 bgs.; wood spirit (@ Philadelphia), 35.

Java Quinine-tenders.

The tenders of Java quinine to be held at Batavia during this year will take place on the following dates: February 3, March 9, April 13, May 25, June 29, August 3, September 7, October 12, November 16, and December 21.

Cod-liver Oil.

The town of Aalesund, which is the principal centre of the Norwegian cod-liver-oil industry, was totally destroyed by fire early on Saturday morning, January 23, the damage being estimated at about a million sterling. The destruction of the town appears to have been very rapid, as the flames were fanned by a gale, and in less than two hours the greater part of the place was razed to the ground. Such a disaster just previous to the opening of the season is particularly unfortunate for the Norwegians, and the prevailing distress and loss of craft cannot but exercise a prejudicial effect on the cod-liver oil industry. Although the majority of the refiners have lost their plant, we learn from Messrs. W. Charity & Sons, 14 and 15 Harp Lane, E.C., that they have received the following cable from Mr. Otto S. Jervell, of Aalesund and elsewhere: "Aalesund totally burned, my warehouse only saved, business will be continued as usual."

A donation of 250*l.* towards relief of the sufferers has been sent by Messrs. T. Wilson, Sons & Co., of Hull, who have also signified their willingness to forward free of charge subscriptions of money, food, clothing, medicine, and other necessities by their mail steamer.

In reference to the cod-fishing we have the following private advice from the North of Norway to hand on January 23: "The fish are reported to be in good condition in this district, but the seals are already on the ground, but not as yet in such numbers as last year. Prices in England have a downward tendency, but I think it is more because holders, who have held to the last in the hope of advanced prices, are becoming afraid of having dear oil left on their hands, than from any present evidence of a good fishing this year." The letter further states: "The men are drawing off to their different destinations, and some of the young ones to America, disheartened with the difficulties of their fatherland."

Heavy Chemicals.

A firm tone is steadily maintained in the heavy-chemical market, and at all main centres a general improvement in the all-round demand is to be reported. New business is, perhaps, not of a particularly heavy character; but calls on existing contracts are satisfactory, and especially so on home account. Export business, as is usual at this season, is on the quiet side, but it is of average dimensions. As regards values there is not much new or of special consequence to report; as a rule they are well maintained, and apparently likely to continue to be.

ALKALI PRODUCE.—Main products are in fair request, bleaching powder, ammonia alkali, soda crystals, and saltcake all standing well. The first-named product is steadily maintained at recent advanced rates, and it does not appear to be at all unlikely that higher figures may rule ere long. Caustic soda, chlorates, and prussiates are a rather quiet market.

RECOVERED SULPHUR is not in over-abundant supply, and late firm position is consequently well maintained. Quotations vary a little, according to circumstances, but 5*l.* 5*s.* to 5*l.* 15*s.* per ton in bags, free on rails, represents the variations.

LEAD COMPOUNDS keep moving steadily, and are without fluctuation in value. White acetate of lead 25*l.* 10*s.*, less 2½ per cent. Glasgow. Brown acetate of lead 16*l.* 10*s.*, less 2½ per cent. Glasgow. Nitrate of lead 22*l.* 10*s.* to 23*l.* per ton, less 2½ per cent. Glasgow.

PEARL HARDENING continues to move freely at unaltered rates of 60*s.* to 65*s.* per ton, f.o.r. or f.o.b., in usual casks.

SULPHOCYANIDES.—Demand still continues disappointing, and recent values are only nominally maintained: Potassium $7\frac{1}{4}d.$ to $7\frac{1}{2}d.$ per lb.; ammonium, 95 per cent., $6\frac{1}{4}d.$ to $6\frac{3}{4}d.$ per lb.; and barium, 95 per cent., $3\frac{1}{2}d.$ to $3\frac{3}{4}d.$ per lb.

German Drug-market.

Hamburg, January 25.

Our drug-market shows a fair amount of business, although prices have undergone little change since last week.

ANTIMONY is steady at 23 m. per 100 kilos.

ALOES (CAPE) is quoted 98m. to 100m. per 100 kilos.

CAMPHOR (refined) continues firm, 600m. per 100 kilos. being asked.

CASCARA SAGRADA is tending firmer, holders asking 175m. per 100 kilos.

CARNAUBA WAX is very firm at from 200m. to 215m. per 100 kilos., according to quality.

CORIANDEER-SEED is firm at 32m. per 100 kilos.

ERGOT is quiet and without much business at from 290m. to 300m. per 100 kilos.

IPCACUANHA is steady, Rio being quoted $11\frac{1}{2}m.$ to 12m. per kilo.

LYCOPodium is firm at 540m. per 100 kilos.

MENTHOL for spot delivery is firm at $39\frac{1}{2}m.$ to 40m. per kilo.

SENEGA is unaltered at 730m. per 100 kilos.

SPIRMECETI is quoted at 217m. to 220m. per 100 kilos. for American.

OILS (FIXED).—Cod-liver oil is quoted 390m. per barrel for non-congealing. Japanese fish oil is firm at 29m. per 100 kilos. Palm-kernel oil shows a strong advance, and castor oil is in better demand, first pressing in barrels being quoted 39m. per 100 kilos.

OILS (ESSENTIAL).—Peppermint is practically unchanged, HGH being quoted $14\frac{1}{2}m.$ to 14m. per lb.; Japanese is offered at $14\frac{1}{2}m.$ to 15m. per kilo.; and Star aniseed is steady at $10\frac{1}{2}m.$ per kilo.

American Drug-market.

New York, January 12.

With the advent of the new year business shows a most encouraging improvement, with an excellent outlook for the future. Sales have not been very heavy as yet, but there is a good inquiry from all sources.

ALOES.—The market for all varieties shows a decided firmness, and holders are not anxious to sell. Prime Curaçoa are firmly held at 4c., and the available supply of Barbados in gourds is well concentrated and held at $6\frac{1}{2}c.$ to 7c. Cape is offered at 15c. per lb.

BALSAM COPAIBA is in good jobbing demand, and Central American finds a ready sale at 34c. per lb.

BUCHU is in fair demand, and selling in a small way at 18c. to 20c. per lb., according to quality.

CANNABIS INDICA.—Demand is light, but dealers are firm in their ideas and will not shade 95c. for prime tops.

CASCARA SAGRADA has been in considerable demand, with fairly heavy sales up to 15c. Holders now ask 16c. to 18c. and 20c. for prime old bark in some cases. The Pacific market has advanced to 16c., with little offering.

COD-LIVER OIL.—Prime Norwegian is still very scarce and holders are firm, refusing to sell below current quotations, \$105 to \$130 per barrel, according to brand. Coast or Newfoundland oil is finding a ready sale at \$2.50 per gal.

CUBE-BERRIES have sold freely at 8c. to 9c. per lb.

DAMIANA-LEAVES are firmer, in view of unfavourable advices from the Pacific regarding the new crop. Only small lots are offered in that market, about 11c. The spot market is well supplied however, and supplies can be bought at 8c. to 10c., according to quality.

GOLDEN SEAL (Hydrastis) is tending upward owing to scarcity, but 75c. will still buy.

MENTHOL is quiet and easy at \$5.25 per lb.

PEPPERMINT OIL is quiet in the absence of important demand, but holders are firm, and \$2.65 is still an inside figure for bulk oil.

QUININE is quiet and unchanged, with sales small. Java is obtainable from second hands at 22c. per oz., and prime German at 24c.

COCAINE has declined to \$3.25 in bulk.

IPCACUANHA (Rio) has declined to \$1.25, in sympathy with foreign markets. Demand is poor.

Cablegram.

HAMBURG, January 27:—Refined camphor is now quoted 600m. per 100 kilos. in bells, being firm. Grey Carnauba wax is offered at 200m. per 100 kilos., and lycopodium at 540m. per 100 kilos.

ACID, CITRIC.—Quiet, at from $11\frac{3}{4}d.$ to 1s. per lb., according to make.

ACID, GALLIC.—B.P. crystals in cases are quoted 1s. $7\frac{1}{2}d.$ to 1s. $8\frac{1}{2}d.$ per lb. according to quantity.

ACID, TARTARIC.—Quiet, but firm, at 1s. $0\frac{3}{4}d.$ to 1s. 1d per lb. for foreign and 1s. $1\frac{1}{2}d.$ for English.

AGAR-AGAR.—For January-February shipment from Japan 1s. 2d. to 1s. 3d. per lb., c.i.f., is quoted.

ARROWROOT.—In auction 80 barrels St. Vincent sold at from $1\frac{1}{2}d.$ to $1\frac{3}{4}d.$ per lb. for good manufacturing, being steady.

ASAFETIDA.—No confirmation has yet been received in regard to the asafetida sold "subject to seller's approval" in public auction last week.

BELLADONNA.—There is a fair demand for *Root*, up to 40s. to 41s. per cwt., c.i.f., being quoted.

CALABAR BEANS.—The s.s. *Warri* from W. C. Africa has brought 34 bags to Liverpool.

CAMPHOR.—There is no abatement in the tension of the market, English refiners selling small quantities of bells, at about 3s. to 3s. 1d., while one refiner quotes 3s. 3d. per lb. A large business has been done in Japanese assorted tablets to refiners and others during the last few days, 2s. 9d. per lb. having been paid for near at-hand, and 2s. $7\frac{1}{2}d.$, c.i.f., for March-April shipment.

Under date of January 20 a Hamburg dealer states that shippers of crude material in the East and the Japanese Government lay claim to the "force majeure" clause since the natives in Formosa have attacked and destroyed the stills.

CANTHARIDES.—For prime sifted Russian of new crop 3s. $5\frac{1}{4}d.$ per lb., c.i.f., is quoted.

CASCARA SAGRADA.—There is a little inquiry, holders quoting from 95s. per cwt. upwards for three-year-old bark on the spot, and 85s. for one year old. There are few sellers, in anticipation of higher prices.

CASCARILLA.—The s.s. *Silesia* from Guayaquil has arrived with 87 bales.

CASSIA LIGNEA.—In auction, good loose quill sold at 48s. 6d. to 50s., good selected bundles at 49s. to 51s., and broken at 45s. 6d.

CEVADILLA-SEED.—Recently about 500 bags of the new crop have arrived at Hamburg, part of which was sold for forward delivery: from 38s. 6d. to 39s. per cwt., c.i.f., is quoted for prompt shipment, according to quantity.

CHILLIES.—At auction 130 bags West Coast African sold at 45s. for fine, and a few bales of Japanese sold at 38s. for good large red.

CLOVES.—The market for Zanzibar cloves has been irregular, with fractional fluctuations in the delivery market. About 3,000 bales have changed hands since our last report, including January-March at $8\frac{1}{2}d.$, March-May at $8\frac{3}{4}d.$ to $8\frac{1}{2}d.$ to $8\frac{3}{4}d.$, June-August $8\frac{3}{4}d.$ to $8\frac{1}{2}d.$, and August-October $8\frac{1}{2}d.$ per lb. To-day 1000 bales sold at $8\frac{1}{2}d.$ for January-March, and 500 bales August-October at $8\frac{1}{2}d.$

CONDURANGO.—Several arrivals have taken place on the Hamburg market lately, and for prompt shipment from that port 34s. 6d. per cwt., c.i.f., is quoted in ten-bag lots.

ERGOT.—Sound Spanish or Russian is quoted 1s. $3\frac{1}{4}d.$ per lb., c.i.f., for prompt shipment from Hamburg.

GAMBIER.—Retail sales of *Cubes* have been made at 37s. 6d. per cwt. for fine pale, and 36s. 6d. for fair.

GAMBOGE.—The s.s. *Merlin* from Hamburg has brought 14 cases. It comes to a bare market.

GINGER.—In auction prices were rather easier. Medium Jamaica sold at 41s to 43s. ordinary at 33s. 6d., and common, slightly mouldy, at 34s. 6d. Fair washed rough, slightly wormy, Cochín sold at 27s., and unsorted native cut at 42s., medium and bold cut being bought in at 60s. Fair limed Japan was bought in at 25s.

GLYCERIN.—Rather more demand has been shown, and in certain quarters some large orders have been placed. Prices for the double distilled are firm but unaltered, on the basis of 67 $\frac{1}{2}$ per ton in five-ton quantities.

GOA POWDER.—A new arrival at Hamburg is offered at 1s. 5d. per lb., c.i.f., in five-case lots.

GUINEA GRAINS.—The s.s. *Batanga* from W. C. Africa has arrived with 120 bags. From Hamburg 44s. 6d. per cwt. net. weight is quoted for five-bag lots.

HYDROKINONE is quoted at from 3s. 7d. to 3s. 9d. per lb. net, according to quantity.

IPEACACUANHA.—The s.s. *Vesta* has arrived from Hamburg with 44 bales.

LYCOPodium.—Treble-sifted quality is offered from Hamburg at 2s. 5d. per lb. c.i.f., net weight. On the spot 2s. 9d. per lb. net is now asked for 10-kilo. lots, being 2d. dearer.

MENTHOL.—Kobayashi on the spot is offered at from 16s. 9d. to 17s. per lb., but very little business has been done.

MORPHINE.—It is reported that Japan has been a large customer for morphine, in consequence of which the makers have taken the opportunity of revising their prices, and now quote 4s. 3d. per oz. net for 100-oz. lots, and 4s. 0½d. for 1,000-oz. quantities. The makers have also decided to abolish the 2½ per cent. discount, and quotations will in future be net.

NUX VOMICA has been very scarce on the spot for some months, and good quality is totally absent.

OIL, COD-LIVER.—Our Bergen correspondent writes, on January 23, that reports regarding the fishing are still few in number, but they appear to confirm what has previously been said regarding the fatness of the livers, which is about on the level of the year 1902, or perhaps a little lower. The prospects of the fishing are considered fairly good, but depend entirely on the weather, which is at present stormy. Small lots of new oil have arrived, and business has commenced at a price equal to 200s. per barrel, f.o.b. Bergen, for prime quality of non-congealing cod-liver oil. The exports from Bergen to date amount to 56 barrels against 255 barrels at the corresponding period of last year.

OIL, TURPENTINE, closes easier at 45s. 9d. per cwt. for American on the spot.

OILS, ESSENTIAL.—Owing to the great scarcity of genuine patchouli-leaves, one leading firm of foreign distillers have raised their prices for oil. *Fisher's* brand is offered at 1s. 6d. per oz. on the spot. Foreign *Juniper-berry* oil is quoted in tins at 2s. 5d. per lb., and artificial oil of *Wintergreen* at 1s. 7d. per lb. net in 28 lb. tins. All descriptions of *Peppermint* oil are dull of sale. American *HGH* is quoted at from 14s. 4½d. to 14s. 6d. per lb., spot, the higher figure being the more current quotation, however. Japanese dementholised is quoted 6s. to 6s. 6d. per lb. for Kobayashi, and outside brands at from 5s. 6d. to 6s. For near at hand business has been done at 5s. 6d., c.i.f., for Kobayashi. Small sales of *Leongrass* oil have been made at 7d. per oz. on the spot; and for *Citronella* oil 1s. 3d. per lb. in tins, and 1s. 2d. in drums is quoted.

PEPPER.—Quiet and easier, with sellers of Singapore on the spot at 6½d., and for January-March and March-May shipment a moderate quantity has changed hands at 6½d. *White pepper* is also quiet at 9½d. per lb. for fair Singapore on the spot and 9½d. to 9¾d. for fair Penang. In auction 100 bags Lampong sold at 5¾d. Superior *White* Singapore was bought in at 1s. 2d., and fair Siam at 9¾d.

PIMENTO.—In auction, good sold at 4d. per lb.

QUILLAIA.—For ton quantities 21s. per cwt., c.i.f., is quoted from Hamburg.

QUININE.—In view of the heavy bark-sale at Amsterdam on Thursday there has been little inclination to do business this week, the market closing with sellers at 11½d. for March, and buyers at 11¼d. per oz. for good German sulphate in bulk.

SAFFRON.—In the absence of business the market is easier inclined, holders quoting from 34s. to 36s. per lb. for B.P., according to quality.

SHELLAC.—A severe decline in prices took place in the speculative market last week, and towards the close a very dull tone prevailed, March selling at 195s. and May at 190s. This week there has been some recovery, but with few sellers only a limited business has been done, February selling at

207s., March 197s. to 200s., May 194s. to 193s., and June 190s. On the spot a small business has been done, including fair TN Orange at 215s. being about steady. Good orange marks continue in small supply, with retail sales at about 230s. spot. AC Garnet is held for 190s.

SODA NITRATE is easier at 9s. 10½d. for refined and 9s. 9d. per cwt. for ordinary.

SOY.—Chinese is quoted 1s. 7d. to 1s. 11d. per gallon.

WAX, BEES.—Business has been done in good to fine bleached East Indian at from 7l. 5s. to 7s. 10s. per cwt.

WAX, CARNAUBA.—Sales in Liverpool include 192 bags of grey and medium Pernambuco at 95s. to 97s. 6d. per cwt.

WAX, JAPANESE, is steady at from 73s. to 73s. 6d. per cwt. spot.

Government Drug-culture In U.S.A.

We have previously referred to the fact that the United States Department of Agriculture has turned its attention to the cultivation of drugs, and it is interesting to learn from the "New York Herald" that the Department have laid out an experimental garden-patch of two acres in extent on the Potomac Flats, close by the City of Washington. The work is being conducted by Mr. F. V. Colville, the botanist in chief, and the plants selected for culture include belladonna, digitalis, aconite, arnica, valerian, henbane, stramonium, senega, serpentina, golden seal, &c. Golden seal, it is said, is rapidly disappearing from the United States, especially in view of the growing foreign demand for it. The most striking feature, however, of this garden is a patch of Indian hemp, the leaves of which are said to reach a height of 10 feet. The success or otherwise of the cultivation of this plant will be watched with interest in many quarters, as the United States is a large consumer of cannabis indica, and has hitherto depended on India for her supply. The Department seem in earnest about the matter, and they intend to make their investigations as complete as possible. A bulletin will eventually be distributed among the farmers for their instruction in the cultivation of medicinal plants.

British v. American Sulphate of Copper.

The British exports of copper sulphate in 1902 showed an increase of fully 20 per cent. over 1901, being 43,289 tons, against 36,025 tons, but values fell by 10,150l. Competition, coupled with a low metal-market, accounts for the slump in prices, but there has been a considerable improvement in values since the new year opened. In 1902 the United States exports averaged about \$96.58 per long ton, which, compared with 1901, is a decrease of \$26.43, or over 21 per cent. in value. The American export-trade has suffered a heavy loss, and in November and December the British article was found competing in the New York and other American markets. The exports through New York, the leading port, in 1902 were as below, comparison being made with 1901, in lbs. :—

	1901	1902	
Austria	3,653,016	3,698,574	+ 45,558
France	1,857,731	1,088,264	- 769,467
Germany and Holland ...	1,461,416	1,941,825	+ 480,409
Great Britain	181,840	—	- 181,840
Italy	27,499,645	14,705,146	- 12,794,499
Portugal	1,263,123	24,940	- 1,238,183
Other countries	559,229	1,280,200	+ 720,971
Total, Europe	36,476,000	22,738,949	- 13,737,051
Africa (French)	164,943	169,172	+ 4,229
Australia	2,420	—	- 2,420
Canada	14,426	—	- 14,426
Central and S. America	553,406	598,693	+ 45,287
Mexico	309,727	116,486	- 193,241
West Indies	41,953	35,290	- 6,663
Grand total	37,562,875	23,658,590	- 13,904,285
Value	\$1,767,087	\$947,926	- \$819,161

The falling-off in exports in 1902 was equal to 37 per cent. in quantity, owing chiefly to the smaller demand from Italy. Although the exports to Greece are not indicated in the above table, no less than 814,365 lbs. were shipped to that country in 1902 against 7,462 lbs. only in 1901. The exports to Great Britain fell off entirely with the entrance of British sulphate into the American market. This caused keen competition in the United States, but this rivalry has been checked by the higher prices ruling in Great Britain.

COMPETENT Assistant; unqualified; 30; good Counter and Prescribing experience; Dispensing, Photography; tall; outdoors; good references. "Chemist," 764 Fulham Road, S.W.

QUALIFIED Chemist, as Manager or Senior; good Dispenser; best experience and references; moderate salary, having some means; London preferred. "W., 5 Blenheim Crescent, W.

QUALIFIED, 8 years' Dispensing and Counter experience in London and Provinces, knowledge of Photography, desires situation in London. I. Wood, The Outgang, Aspatria, Cumberland.

ASSISTANT or Branch; experienced Prescriber, Dispenser, &c., Photography, Aërated Waters; aged 35; married; 6 years' present position; excellent references. Munslow, Boston, Lincs.

JUNIOR; tall; 19; served apprenticeship; recently passed Preliminary examination, College of Preceptors; good references. E. Marsden Lloyd, 20 Elm Street, Ferndale, South Wales.

BRANCH-MANAGER; permanent or part-time; over 3 years in present situation; elderly; qualified; good references; disengaged first week February. Address, 99/20, Office of this Paper.

PART-TIME Situation required by experienced Assistant (Hall qualification); disengaged until 5 P.M. daily or three evenings from 6 P.M.; take charge; highest London references. "Chemist," 11 Baalbec Road, Highbury, N.

UNQUALIFIED (27½), married, 12 years' experience, desires permanency; dispenser, prescriber, extractor; Photography (including enlarging, &c.); abstainer; good references. "Nyddsey," 14 Milton Road, Waterloo, Liverpool.

COMPETENT Assistant; unqualified; 29; 13 years' good Counter and Prescribing experience; Dispensing and Photography; abstainer; energetic and obliging; married; permanency; outdoors. B. White, 11 Alexandra Road, Shipley.

FRENCH Assistant (28), excellent experience Riviera, Switzerland, 18 months in England, fluent English, highest references as to character, wants situation in London Pharmacy in March. "Rebec," Wyatt, Pharmacist, Bootle, Liverpool.

10/- given to anyone who can obtain an outdoor berth in good-class business for Junior, with good experience and references; month's notice must be given; 35s.; capable of taking charge; stores no object; 22½. 93/24, Office of this Paper.

SENIOR or Manager; 35; married; West-end and country experience, Photography and X Rays; highly recommended by present and previous employers; leaving through reduction of staff. All particulars to Courtney, 91 Earlsbrook Road, Redhill, Surrey.

WHOLESALE.

ASSISTANT (Wets or Dries); good Wholesale experience; 22. 94/17, Office of this Paper.

MAJOR Student (28) desires permanency in Wholesale House. 99/1, Office of this Paper.

WAREHOUSEMAN; well up in Sundries; aged 20. "Sundries," 24 Hubert Grove, Stockwell.

ASSISTANT (30), 12 years' experience, seeks situation in Wholesale House. "P., 15 Thane Villas, Holloway, London.

TRAVELLER (good all-round) desires engagement; Drugs, Ess. Oils, Sundries, &c. "W. J. B." (95/9), Office of this Paper.

QUALIFIED Chemist, experienced in all branches, wishes to Represent good firm. "Energetic" (80/33), Office of this Paper.

EXPERIENCED Representative seeks re-engagement with well-known Medical and Veterinary house. 99/15, Office of this Paper.

ADVERTISER (29) wants situation; 4 years' experience Wholesale despatch clerk; stockkeeper. 2 The Broadway, Ashford, Middlesex.

YOUNG man desires situation with good Wholesale firm; 3½ years' experience in Retail; London preferred. 96/40, Office of this Paper.

EASTERN COUNTIES.—Agency or Representation desired 3 or 4 days weekly; 28; experienced. "Lindum" (95/40), Office of this Paper.

TRAVELLER (Chemist) wishes re-engagement; 4 years' experience of Medical profession; Speciality preferred. Denton, Plumpton Street, Wakefield.

CHEMIST (22 years in own business) as Traveller or other position of Trust, in good firm; aged 48, but very active. "G." (99/3), Office of this Paper.

YOUNG Man (25) seeks situation; experienced in Sundries, Glass Bottles, Packing, &c.; good references. "M., 12 Abbeyfield Road, Rotherhithe.

REPRESENTATIVE (30), 15½ years' experience, open to represent Drug, Sundries, or Perfumery house in N.E., N., or Scotland. "Brotherhood" (38/1), Office of this Paper.

TRAVELLER; 7 years' experience London suburbs and South Coast; Drugs, Sundries, and Perfumery; aged 32; tall; satisfactory references. 93/32, Office of this Paper.

TRAVELLER; Drugs or Sundries; disengaged; first-class references, connections; will call anywhere in town on receipt of letter. "Integrity," 188 Falcon Road, Battersea, S.W.

TRAVELLER (35) open to represent a good Drug or Sundries house; 15 years' associated with Chemists and Druggists, 9 years with present firm. Apply, "Sundries" (97/7), Office of this Paper.

REPRESENTATIVE of Messrs. Marion James & Ker, London (Toilets and Soaps), requires good firm conjointly; part expenses; good connection N.E. Counties. Hutchinson, Okeford, Redcar.

TRAVELLER seeks re-engagement, Sundries preferred; good connection with chemists and high-class hard-dressers; South Coast and Scotland; excellent references. "E. Y." (98/16), Office of this Paper.

YOUNG Druggist, German, 22 years, free from military service, having been for 4 years in Wholesale business, wants situation in Wholesale or Export trade; speaks French, German. Apply to Mr. Th. Bergk, 25 Rue Jacob, Paris.

GERMAN (27), 8 years' in leading Wholesale Chemist and manufacturing business in Berlin, 3 years as a manager, desires situation; fair knowledge of English; best German and English references. Sch., 27 Aberdeen Road, London, N.

TO Wholesale Druggists.—Advertiser, with 20 years' experience in well-known Houses, desires re-engagement as Manager or Representative; intimate knowledge of details and working of all departments, both Chemists and Surgeon's trade, familiar with best markets for Drugs and Sundries; excellent Counting-house experience; accustomed to control; aged 37. Address, "Management," c/o J. W. Vickers, 5 Nicholas Lane, E.C.

AGENCIES.

3s. 6d. for 50 words or less; 6d. for every 10 words beyond.

SOUTH AFRICA.—Advertiser, returning in March to represent firm of high-class Manufacturers, is open to Represent another concern of good standing. Apply, "Springfield" (25/66), Office of this Paper.

GENTLEMAN (qualified Chemist), residing in Australia, on a visit to London, will be shortly returning, is desirous of Representing exclusively a good reliable Manufacturing firm trading in Druggists' Sundries, Soaps, Photographic Materials, Perfumery, &c.; personal interview solicited; can give satisfactory London references. Apply, 93/35, Office of this Paper.

PRESERVATIVES AND COLOURINGS.—We are desirous of appointing one firm of leading Chemists only as Selling Agents in centres of Agricultural districts, and invite applications for terms from firms having a connection amongst Dairymen, Cheese and Butter Factories, and Farmers. Keeps (Limited), 4 Redcross Street, London, E.C.

WANTED, Agents calling on Chemists, &c., to sell Toilet-soap, 2/ and 1d. lines, by old-established soap-manufacturers; Midlands and South, including London; good commission. 11/21, Office of this Paper.

MANUFACTURING AGENTS WANTED.

UNIQUE OFFER TO CHEMISTS.

THE Proprietor and Sole Manufacturer of a phenomenally successful Toilet-requisite, absolutely indispensable to the high-class Chemist and the fashionable Perfumer, in order to ensure that on his Retirement it shall continue to be sold at the full Retail price, and only through the legitimate trader, has resolved to constitute every high class Pharmaceutical Chemist in Great Britain, who is a subscriber to the "C. and D.," a Manufacturing Agent, to whom he will give the Formula and Right of Manufacture, on condition that the recipients shall not put this Toilet-requisite on the Market lest it should reach the Stores through the Wholesale Houses, but shall sell it, as it has been hitherto sold, direct to the Public, and at the full face-value price.

N.B.—Subscribers to the "C. and D." should write at once, enclosing stamped addressed envelope, to "Manufacturer, Indispensable Toilet-requisite" (38/2), Office of this Paper.

MISCELLANEOUS.

Special charges are made for Advertisements under this heading, which can be obtained on application.

SHOW-CASES. Counter Dispensing-screens, Desks, and other Shop-fittings, secondhand, to be sold at Bargain Prices; early application necessary. Coward, 9 Biggmarket, Newcastle-on-Tyne.

CHEMISTS requiring Syphons engraved with their own name and refilling with pure Mineral Waters should apply for terms and particulars to Idris & Co., Ltd., Syphon and Mineral Water Manufacturers, Camden Town, N.W.

CHEMIST'S SUNDRIES.—Patent Medicines packed in free cases, **Carriage Paid.** Write for Illustrated Price List and Terms, which will be sent, post free, on receipt of application. May, Roberts & Co., 9 and 11 Clerkenwell Road, London, or 16 Westmoreland Street, Dublin.

SMART and up-to-date Advertisements designed and written for Handbills and Newspapers; satisfaction guaranteed; orders executed within 3 days. Send for particulars of Handbills, 10,000 demy 8vo., 5s. per 10,000, carriage paid, B. Whitworth Hird (Limited), Advertising Specialists, Norwich.

NEW SYSTEM OF ACCOUNTS for Retail Business; recommended by all leading Trade papers; requires no knowledge of bookkeeping. If you desire to keep your Accounts with genuine simplicity and every satisfaction, send for particulars and unequivocal opinions to McQueen & Sons, Addiscombe, Croydon. Press says: "Just what was wanted"; "Unlike many others, is really of value."

McADAM & TUCKNISS, Sharedealers, Blackheath, London, S.E. Telephones 81 & 81A Lee Green.

SHARES ON SALE (free of commission, subject).—3 £50 4½ per cent. Camwal debentures; 355 G. B. Kent & Son preference 20s. 6d.; 100 International Sponge Importers 6 per cent. preference 20s. 9d.; 150 W. Jameson ordinary 19s. (last dividend 11 per cent.); 200 Barclay & Sons fully paid preference 13s. 6d. (last 6 years' dividends 5 per cent.); 65 Lewis & Burrows 6 per cent. preference 13s. 6d., 250 ordinary 8s. 9d. (last dividend 4 per cent.); 233 A. J. White ordinary 4s. 10½d., 150 6 per cent. preference 9s. 7½d.; 10 Apollinaris ordinary £7 3s. 9d.; 100 International Plasmon ordinary 19s. 9d.; 50 Vi-Cocoa preference 16s. 3d.; 30 Idris "A" preference 23s. 6d.; 5 Lever Brothers preference £11 14s. 9d.

WANTED (subject).—80 Benger's ordinary 20s. 3d.; 50 Camwal ordinary 8s. 6d. (small lots 7s. 3d.), 50 preference 12s.

List of shares for sale and wanted sent free on application. References to bankers and many clients.

CHEMISTS' FITTINGS, as following, for £35 the lot:—10-foot run of drawers, shelves, and lockers complete, mahogany fronts, with glass labels and glass knobs; 10-foot mahogany-top serving counter; 4-foot mahogany and glass wall-case; 5-foot dispensing screen, mirror centre; perfume-case and desk; mahogany and bent-glass counter-case. Can be seen at

PHILIP JOSEPHS & SON, 93 Old Street, London, E.C.

CHEMIST'S SHOP FIXTURES.—Ranges mahogany drawers, with bevelled-edge glass labels and cut-glass knobs, shelving above, lockers below; mahogany dispensing-screens; counters with glass-case fronts; wall-cases; bent-front and flat-top counter-cases; counter-desks; tooth-brush cases; complete shop-rounds, &c.; every requisite for chemists, new and second-hand; extensive stock to select from, at extremely low prices; practical men sent to all parts; estimates free. Matthews, Chemists' Fitter, 14 and 16 Manchester Street, Liverpool. Works: 9 Preston Street, Telephone 6695. Illustrated catalogue on application.

SECONDHAND FITTINGS. Important to Chemists.—We have for Disposal the whole of the Fittings of 3 first-class Shops, comprising Glass-front and Panel-front Counters (Mahogany tops), Dispensing-screens, Wall-fittings, Wall-cases, Counter-cases, Shelving, Cupboards, Nests of Drawers (glass labels and knobs), Window-enclosures, Desks, Loft's Cash-tills, &c., &c.; they are, we believe, the finest lot of Fittings ever offered; we bought them cheap, we will sell them cheap, separately or in one lot. Apply, Rudduck & Co., Shop-fitters and Shop-front Builders, 262 Old Street, London, E.C.

CHEMISTS starting business or contemplating alterations will do well to write us for Plans, Specifications, and Estimates. **Shops fitted from £35.** Mr. Treble personally superintends all work, and will wait upon clients and give them the benefit of his long experience and advice if desired. Cheapest House for Shop Fronts and High-class Fittings; terms to suit all. **TREBLE & CO.** Complete Shop Fitters, Rectory Works, Rendlesham Road, Clapton, London, N.E.

THIS WEEK'S "C. & D." IN BRIEF.

ANOTHER LEAD IN CREAM OF TARTAR CASE is reported on p. 234, and more will be heard of.

THE NAMES of those who passed the Institute of Chemistry examinations are printed on p. 223.

THE LATEST STORE PRICES are chiefly alterations. Cod-liver oil is now 1s. 4d. per 8-oz. bottle (p. 223).

THE education of M.P.'s, mortar-collecting, and Joseph Priestley are "Xrayser's" subjects this week (p. 237).

THE PROPOSALS for the alteration of the Spectacle-makers' Company's examination are mentioned on p. 223.

THE CASE of Bostock v. Nicholson about arsenical vitriol has been decided in favour of the plaintiff with certain reservations (p. 234).

"ABSORBINE" has been ordered to be removed from the Trade-marks Register because the Judge considered it is not an invented word (p. 233).

THERE is scope for British push in Spain, Mr. Harold Wyatt thinks. He visited the Peninsula, and has given Liverpool chemists the benefit of his experience (p. 243).

THE PHARMACEUTICAL COUNCILLORS who retire next May are mentioned on p. 229. The vacancy caused by the death of Mr. John Taylor is to be filled up next month (p. 228).

MR. JAMES REID unmercifully, but with humour, chaffs territorial-representation enthusiasts, and suggests that the steam should be used to drive the legislation engine (p. 234).

CUFF'S FLY-OIL has brought two ironmongers in Maybole, and an assistant of each, into trouble for selling it contrary to the provisions of Section 17 of the 1868 Pharmacy Act (p. 235).

MR. CURRIE complained at Wednesday's Council-meeting about the publicity given to Scotch prosecutions under the Pharmacy Act, but he got little comfort from his colleagues (p. 229).

THE TESTS for arsenic were discussed at this week's meeting of the London Section of the Society of Chemical Industry, Dr. T. E. Thorpe giving some interesting and valuable information about zinc for use in arseniuretted-hydrogen tests (p. 242).

OUR SYMPATHIES and HOPES for a speedy recovery are extended to Mr. Atkins (President of the Pharmaceutical Society), who, owing to a painful but not grave illness, was prevented from attending this week's Council-meeting. He has not been absent before (p. 228).

THE PHARMACY BILL is to be introduced by Mr. Lough, who has the support of all last year's backers except Mr. John Burns and two Scotch members—Mr. McCrae (East Edinburgh) and Mr. Reid (Greenock). The matter was discussed at the Council meeting on Wednesday (p. 228). We comment upon it on p. 238.

DR. BALFOUR MARSHALL, the Privy Councillor's visitor to the Pharmaceutical examinations in Edinburgh, does not agree with division of the Minor, and wants a compulsory curriculum (p. 228). We ask Dr. Marshall why he denies to pharmacy students a privilege he had as a medical student (p. 240).

THE WRITER of "Now and Then" concludes his historical survey of the Medicine-stamp Act, which has demonstrated that the craft-qualification of chemists has always been recognised by the Act, and that this is an asset which chemists should tenaciously retain and insist upon their representatives protecting (p. 236).

THE MARKET-MOVEMENTS this week include a reduction of ½d. per oz. in German quinine, an advance of 1s. 3d. per lb. in santolin, and 5s. per ton in copper sulphate. Gentian, golden seal, and vanillin are firmer; cocoa butter and potashes are easier. Cinnamon-leaf, clove, and eucalyptus oils are dearer. An auction of first and second hand drugs was held to-day (p. 249).

THE EDUCATIONAL INSTITUTIONS advertising in this issue are as follows:—

School of Pharmacy, 17 Bloomsbury Square, W.C.
Westminster College of Chemistry, Trinity Square, Borough, S.E.

Leeds College of Pharmacy, Clarendon Road, Leeds.
Liverpool School of Pharmacy, 6 Sandon Terrace, Liverpool.
Royal Dispensary, 21 West Richmond Street, Edinburgh.
South London School of Pharmacy, 325 Kennington Road, S.E.
Metropolitan College of Pharmacy, 160 to 162 Kennington Park Road, S.E.

London College of Chemistry, 323 Clapham Road, S.W.
Brixton School of Pharmacy, 171 Brixton Road, S.W.
Burlington Correspondence College.

New Companies & Company News.

BOTANIC MEDICAL HALL (LIMITED).—Registered in Edinburgh. Capital 1,000*l.*, in 1*l.* shares. Objects: To carry on in Glasgow or elsewhere the business of wholesale and retail herbalists, perfumers, dealers, and manufacturers in all its branches. The first subscribers are: T. Beattie, 40 Queen Street, Glasgow, herbalist; W. Paterson, 40 Queen Street, Glasgow, assistant; A. Elliot, 40 Queen Street, Glasgow, assistant; H. Bell, 34 Southwell Street, Glasgow, picture-frame maker; G. McCall, 70 Union Street, Glasgow, fancy-box maker; J. Macfarlane, 24 Blythwood Square, Glasgow, solicitor; and J. Beattie, North Bank, Shettleston, Glasgow, gardener. Registered without articles of association. Registered office, 40 Queen Street, Glasgow.

CLOWN DRUG COMPANY (LIMITED). Capital 500*l.*, in 1*l.* shares. Objects: To carry on the business of wholesale and retail chemists, druggists, and opticians, dealers in all kinds of salts, acids, alkalies, drugs, medicines, herbs, pharmaceutical, chemical, and surgical materials and appliances, photographic materials, and scientific and optical instruments, &c. The first subscribers are: W. Dawson, The Green, Clown, Derbyshire, grocer; O. Hibbard, Mill Street, Clown, Derbyshire, boot and shoes dealer; J. H. Eastwood, Coronation Buildings, Clown, Derbyshire, furniture dealer; Miss B. A. King, The Green, Clown, Derbyshire; Mrs. R. H. Eastwood, Coronation Buildings, Clown, Derbyshire; Mrs. H. Hibbard, Mill Street, Clown, Derbyshire; and W. Dust, 23 Change Alley, Sheffield, solicitor. No initial public issue. Registered without articles of association. The first directors are: O. Hibbard and J. H. Eastwood. Registered office, Central Stores, The Green, Clown, Derbyshire.

HAYDOCK & Co. (LIMITED).—Registered in Dublin.—Capital 500*l.*, in 1*l.* shares. Objects: To acquire and carry on the business of druggists and general merchants now carried on at Dublin by Wm. F. Haydock, under the style of "Haydocks." The first subscribers are: Wm. F. Haydock, 47 Dolphins Barn, Dublin, druggist; Mrs. E. K. Haydock, 47 Dolphins Barn, Dublin; I. C. Dawson, 63 Lower Beechwood Avenue, Dublin, chemist's assistant; A. W. Kirkpatrick, Carnalea, Victoria Road, Clontarf, Dublin, manufacturers' agent; W. M. Cunningham, Strathmore, Howth, co. Dublin, manufacturers' agent; J. Haydock, Cornamuckla House, Dungannon, farmer; and I. E. Haydock, Cornamuckla House, Dungannon, contractor. W. F. Haydock is the first director. Registered office, 47 Dolphins Barn, Dublin.

PRICE'S PATENT CANDLE COMPANY (LIMITED).—The accounts show a profit for 1903 of about 89,100*l.*, to which has to be added 6,145*l.* undivided profit from 1902, making together about 95,200*l.* Deducting the dividend of 15*s.* per share, amounting to 28,125*l.*, paid in September, 1903, a sum of about 67,100*l.* will be available for disposition. The directors recommend that 10,000*l.* be written off for depreciation, 5,000*l.* added to the reserve fund, 5,000*l.* added to the insurance fund, 37,500*l.* applied in paying a dividend of 1*l.* per share, and that the remainder, about 9,600*l.*, be carried forward.

BORAX CONSOLIDATED (LIMITED).—The report for the year ended September 30 states that profits for the period, after providing for all management and administration expenses, are 266,270*l.* Debenture interest for the year, interim dividend on the preference shares, interim dividends on the ordinary shares paid May 1 and August 1, and income-tax to April 5, 1903, amounted to 107,485*l.*, leaving, with the amount brought forward, 170,642*l.* Of this 17,500*l.* has been placed to depreciation-reserve account, and 5,825*l.* to credit of the debenture-stock redemption sinking fund. The directors recommend a final dividend of 1*l.* each on the ordinary shares, making 17½ per cent. for the year, placing to general reserve 20,000*l.*, writing off the year's expenditure on inspection and development of properties 19,681*l.*, and carrying forward 10,635*l.*

JEYES' SANITARY COMPOUNDS (LIMITED).—The annual meeting of this company was held at 64 Cannon Street, E.C., on February 4, Mr. H. H. Nelson (chairman) presiding. In moving the adoption of the directors' report, the Chairman said the directors proposed a far larger distribution of profit than in former years, for they felt that the position of the company was now on so solid a basis that to keep on hoarding up a reserve fund was unnecessary. It was proposed to pay a dividend for the year of 20 per cent., including the 10 per cent. interim dividend already paid, and to further

pay a bonus of 20 per cent., the whole free of income-tax. This with the income-tax would be really a dividend of 42 per cent., which should be highly satisfactory. One matter that should be satisfactory was the settlement of the long litigation they had had with their late representative in Germany, Mr. Pearson, about whom he would be well advised, as also the shareholders, not to say too much. As far back as 1837, Mr. Pearson was given the sole right to sell Jeves' compounds under the trade-mark of "Creolin" in Germany, and was hound down to sell no other make, but hit by bit the trade diminished until about 1903 his orders were next to nothing. During the litigation, however, he had admitted that at least since 1897 he had secretly made a disinfectant and sold it under the name of "Creolin." Their leading counsel (Mr. H. F. Dickens, K.C.) had suggested the compromise as the quickest and cheapest way out of the difficulty, and now Jeves' goods would be known only as "Cyllin," under which name they hoped to regain the German business. The report was adopted, and Mr. Nelson was re-elected chairman for the ensuing year.

Personalities.

M. GEYSER is the Algiers photographer from whose work we reproduced the pictures on pages 173 and 174 of our Winter Issue.

MR. JOHN MORGAN RICHARDS will preside at the festival dinner of the Reedham Orphanage at the Whitehall Rooms, Hôtel Métropole, on March 17.

MR. HENRY D. KELF, pharmaceutical chemist, who has held the post of dispenser at the Southwark Infirmary, East Dulwich, S.E., for over four years, has resigned his appointment.

SIR THOMAS HANBURY, K.C.V.O., of La Mortola, Ventimiglia, Italy, has been awarded by the Veitch Memorial Fund trustees the large silver medal for distinguished service to horticulture.

AN ENGAGEMENT is announced between Harry, second son of Mr. James Brand, of 10 Marchmont Terrace, Kelvin-side, Glasgow, and Mercedes, younger daughter of Mr. F. Harwood Lescher, of 31 Devonshire Place, W.

MR. H. C. G. HOLLINGSBURST (of Hollingshurst & Co., chemical merchants and importers, 127 Fenchurch Street, E.C.) has been installed Worshipful Master of Duke of Connaught Lodge of Freemasons, No. 1,524. The installation-hanquet took place at Anderton's Hotel, Fleet Street, E.C., on January 28.

MR. THOS. GARRATT FORSHAW, "at one period the only chemist and druggist in Bradford who was a member" of the Pharmaceutical Society of Great Britain, is the subject of a column "Pen Portrait" in the "Bradford Weekly Telegraph." The circumstances which robbed Mr. Forshaw of the above distinction are not noted.

MR. HENRY WELLINGTON WACK, who, with singular ability has during the past five years steered the barque of Mother Seigel into comparatively calm waters, is retiring from the management of A. J. White (Limited). Mr. Wack is continuing his interest in the company, however, and it is arranged that he shall hold an unofficial relation to the Board and advise it when necessary. Mr. Lyman Brown, of New York, has been appointed managing director.

MR. W. C. FORD, chemist and druggist, Camden Road, N.W., has taken over the business of Mr. F. E. White, chemist and druggist, at 4 Mitre Terrace, Tooting, and will carry it on as a branch under the style of Ford's Drug-stores.

MESSRS. W. S. POTTER (LIMITED), wholesale and retail chemists and druggists, wholesale sundriesmen, &c., High Street, Plaistow, E., intimate that they have sold their business to Mr. William Potter, who has been managing director of the business since its incorporation in 1892. He will now trade as W. S. Potter & Co.

Exchange Column—Bargains.

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Remittances payable to **EDWARD HALSE, and crossed MARTIN'S BANK, LIMITED.**

FOR DISPOSAL.

BOOKS AND PERIODICALS.

Chemical Society's Journals, Proceedings (complete, with indexes) 1901, 1902. 40 Wilson Road, Cambervell, S.E.

DRUGS AND CHEMICALS.

50 lbs. oxalate potass., neutral (Scherling's); **5d.** lb. net, carr. paid. WRIGHT, Chemist, Burnley.

1½-lb. bottle ol. lavand. ang. (Potter & Moore), old, 35s.; also ¼-lb. bottle (Barnett's), 5s. LAYLAND, Chemist, 413 Oxford Road, Manchester.

FORMULÆ.

Reliable and practical recipes (20 years' reputation) of good, useful, elegant, and profitable specialties; "Glycerine Oream," non-sticky, inseparable, snow-white, emollient; "Linseed and Licorice Balm," excellent cough-cure, very pleasant; "Chilblain Cure," broken and unbroken, acts like magic; "Harmless Headache Powders," give instant ease, no danger; "Corn Cure" (no collodion), answers after all others fail; recipes **1s. 1d.** each, **3 for 2s. 6d.**, free; send for detailed printed list, free. TOM BROOKS, Chemist, Hornsey, London, N.

OPTICAL AND PHOTOGRAPHIC.

500 Oxford mounts, No. 2,322, 2,324, 2,326, Houghton's list; what offers? WALTER, Chemist, Penzance.

PROPRIETARY ARTICLES.

Daisies.—Several gross **1s. 1½d.**; **8s. 9d.** doz., **3 doz. 8s. 6d.**, gross £5, post paid, cash with order. VINE, Chemist, Fratton Road, Portsmouth.

Stocktaking surplus.—**3 doz. 8d.** Swinburne's kinglyglass, **3s. 8d.** doz.; **3 doz. 1s.** ditto, **5s. 6d.** doz.; **6 doz. 1s.** Vin. Vitæ, **8s. 6d.**; **2 doz. 2s.** ditto, **16s. 6d.**; **3 doz. 1s.** Uno's Indian balm, **8s. 6d.**; **6 doz. 6d.** Adams's extract herbs, **2s. 6d.** doz.; **6 doz. 1s.** Koko, **8s. 6d.** doz.; **6 doz. 2s. 6d.** ditto, **18s. 6d.**; **6 doz. 9d.** Sand's liver-seeds, **6s. 6d.** doz.; **6 doz. 9d.** Pectakos, **6s. 9d.** doz.; **6 doz. 1s.** Mellin's emulsion, **7s. 6d.** doz.; **2 doz. 2s. 6d.** ditto, **14s. 6d.**; **2 doz. 1s. 1½d.** Storcroft's cure, **9s. 6d.**; **3 doz. 6d.** Sanson's nursery-oils, **3s. 9d.** doz.; **6 doz. 7½d.** Dolze's crocote, **5s. 3d.** doz.; **6 doz. 1s. 1½d.** ditto, **9s. 6d.**; **2 doz. 1s. 1½d.** Bushby's Neurotonic, **9s. 6d.** doz.; **2 doz. 4s. 6d.** Stearn's wine, **37s. 6d.**; **1 doz. 2s. 9d.** Varvein, **25s. 6d.**; cash with order; carriage paid. HOWELL & Co., 125 King Street, Oldham.

SHARES.

Shares for sale.—See Miscellaneous column (p. 66).

What offers for 20 or 40 Westminster College £1 shares? last dividend **7½%**. "STATIM," 16 Rylett Road, Ravenscourt Park, W.

SHOP FITTINGS.

Outside lamp, bracket, and fittings, ruby glass, embossed lettering "Cash Chemist," about 2 ft. high; offers. GREENWOOD, Chemist, Blackpool.

Engraved oval carboy (3 gals.), standing on 3 brass legs, 42 in. high. W. T. & Co.'s; nearly new; brass coronet on top; lovely centre-piece for chemist's window. BILLINGTON, Chemist, Blackpool.

Mortars and pestles; new; all guaranteed acid-proof.—**1 each:** 5, 6, 8, and 10 in., 3×9 in., 5×7 in.; all 9 spare pestles; **1 each:** 6, 7, and 8 in., 2×9 in., 2×10 in.; offers. MYER, 73 Hyde Road, Manchester.

4-ft. drawers, lockers, shelves; **4-ft. drawers, lockers, and 2 cupboards, shelves over**; **2 cupboards, shelves over**; flat glass case; bent ditto; upright case, shelves back, dispensing; **10-ft. wall-case**; about 300 shop-rounds; **3 and 5 gr. pill-machines, mortars, &c.**; stamp for list. JONES, Chemist, Loughborough.

MISCELLANEOUS.

Clark's syphon-stove; equal to new; half-price. JAMES, Chemist, Llanelly, Wales.

What offers? 24 single and double trusses; quantity shopfittings. 93/15, Office of this Paper.

Century bath-cabinets (4), Nos. 1 and 3; quite new; what offers? MARCH, Chemist, Torquay.

Typewriter.—Yost No. 4, in perfect working order; price £6. "H. & Co.," 127 Fenchurch Street, E.C.

Water-bed (Maw's), 48×36; only in use 2 days; what offers? MOORHOUSE, 12 Market Hill, Barnsley.

Gramophone, cost 6 guineas; also 22 records; good make and new condition; price £4 10s. WALTER, Chemist, Penzance.

52½ doz. Jahnecke's metallic gold and silver colour boxes, 2 in. × ½ in. round, labelled "Tooth Powder," in cartons; **42s.** the lot. "G.," 22 Waldegrave Road, Brighton.

Knight's "Materia Medica," 6s.; Maisch's, 6s.; Ramsay's "Inorganic Chemistry," 7s. 6d.; **2 doz.** botanical slides, 8s.; **2 doz.** materia-medica slides, 9s. 65 Newington Butts, S.E.

Water-bath, new; **3 pear-shaped carboys**; Galapin's "Midwifery," 4th edition; **2s. 9d.** chlorobrom; Bridal-bouquet Bloom; offers, or exchange photo goods. FUGE, Chemist, New Brompton.

Three show-jars, coloured and gold scroll labels, 3s. 6d. each; **2 and 1 gal.** carboys, 3s., 4s. each; pill-machine, 4s.; lower incisor and right upper molar forceps, 2s. 6d. pair. CARTER, Chemist, Woolwich.

WANTED.

Bennett's massage-stones, cheap. THOMPSON, Chemist, 17 Gordon Street, Glasgow.

"Art of Dispensing," B.P. ('98). DUNNING, 14 Market Square, Wellington, Salop.

"Chemist and Druggist," January 9, 1904. Send flat to "S. B.," Office of this Paper.

Old artificial teeth bought; cash by return post. DENT, 298 Battersea Park Road, London.

Sparklet "B" bulbs; any quantity; must be cheap. MAITLANDS, 233 East India Road, E.

Drug-scales, to weigh up to 28 lbs.; good condition. WARREN & Co., 340 Harrow Road, London.

Tincture-press, double action; **1 or 2 gal. size.** State price, &c., D. STEWART ROBERTSON, Chemist, Rutherglen.

Small tablet or other machine to make ½-in. or ¼-in. cubes from damp composition. BRADLEY, Skelton-on-Ure, Ripon.

To buy secondhand chemist fittings, shop-rounds, jars, utensils; must be in good order. T. HARRISON, 388 Clapham Road, Clapham, S.W.

Soda-fountain, complete, with accessories; Stiles's make preferred; one of their cheaper ones, nearly new. State lowest cash price to 38/14, Office of this Paper.

Minor books.—Rensen's "Organic," Lowson's "Botany," Everett's "Physics," Ince's "Latin," Greenish's "Mat. Med." State lowest price, "W. S.," 75 Neill Road, Sheffield.

Southall's "Mat. Medica," Periera "Selecta Prescripta," Newth's "Chemistry," Ince's "Latin Grammar," Muter's "Analysis" (qual. and volumetric), Perkin's and Kipping's "Chemistry." State lowest terms (cash) to HOWARTH, 4 Vermont Street, Bolton, Lancs.